FIG. 1

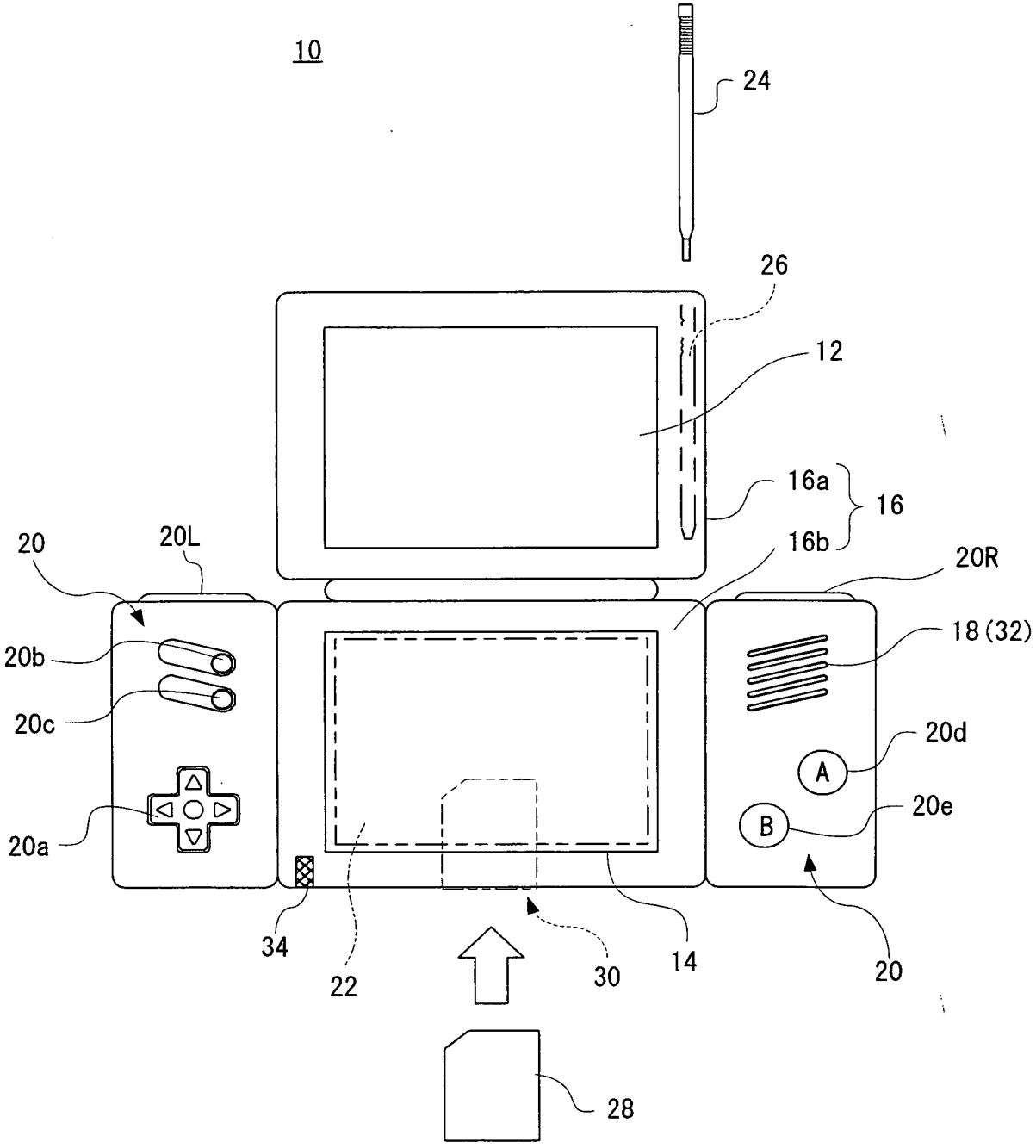

10
24
26
12
16a
16
16b
20
20L
20R
18 (32)
20b
20c
20d
A
20e
B
20a
34
22
30
14
20
28

FIG. 2

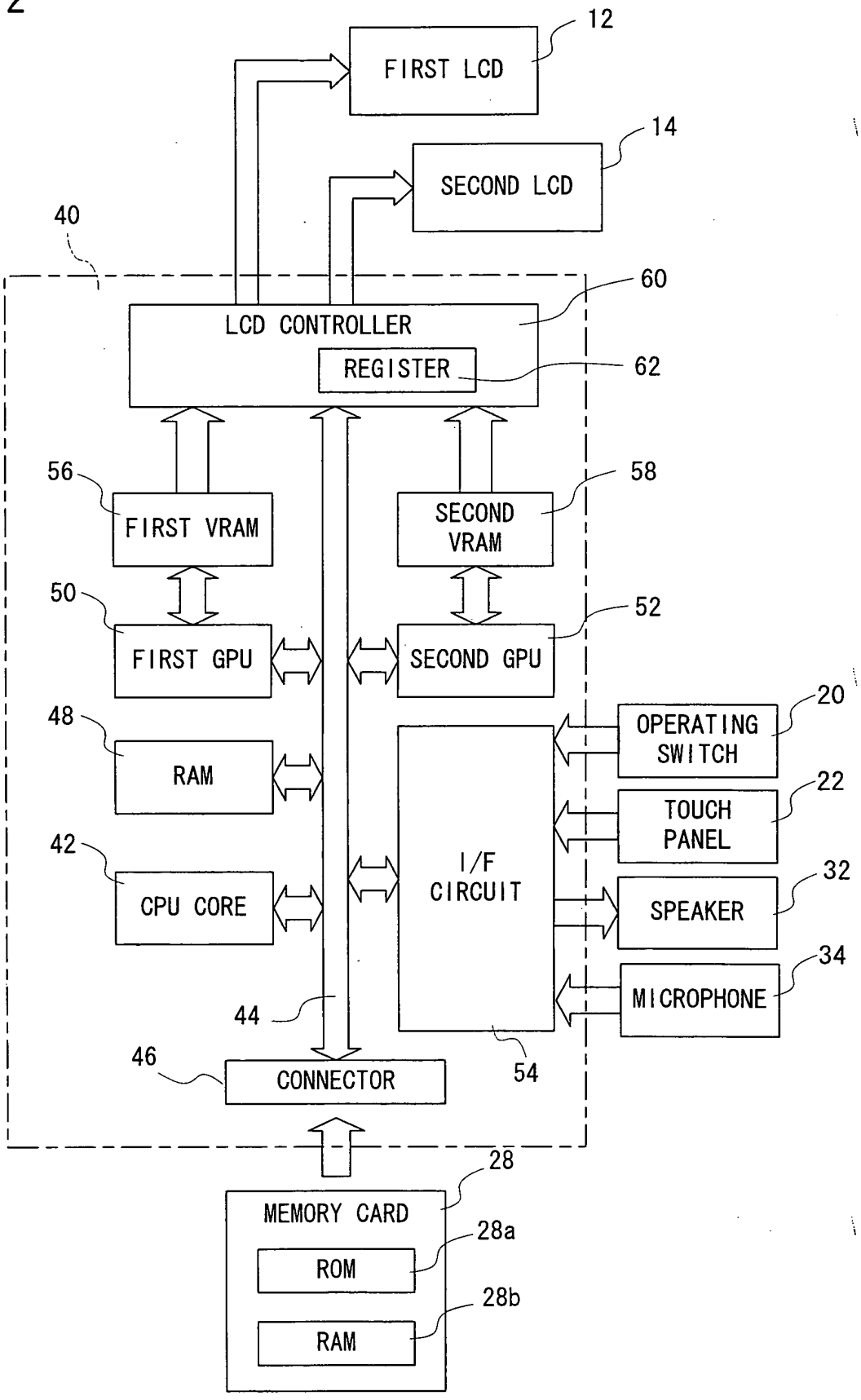

12
FIRST LCD
14
SECOND LCD
40
60
LCD CONTROLLER
REGISTER
62
56
FIRST VRAM
58
SECOND VRAM
50
FIRST GPU
52
SECOND GPU
48
RAM
42
CPU CORE
I/F CIRCUIT
20
OPERATING SWITCH
22
TOUCH PANEL
32
SPEAKER
34
MICROPHONE
44
46
CONNECTOR
54
28
MEMORY CARD
28a
ROM
28b
RAM

FIG. 3

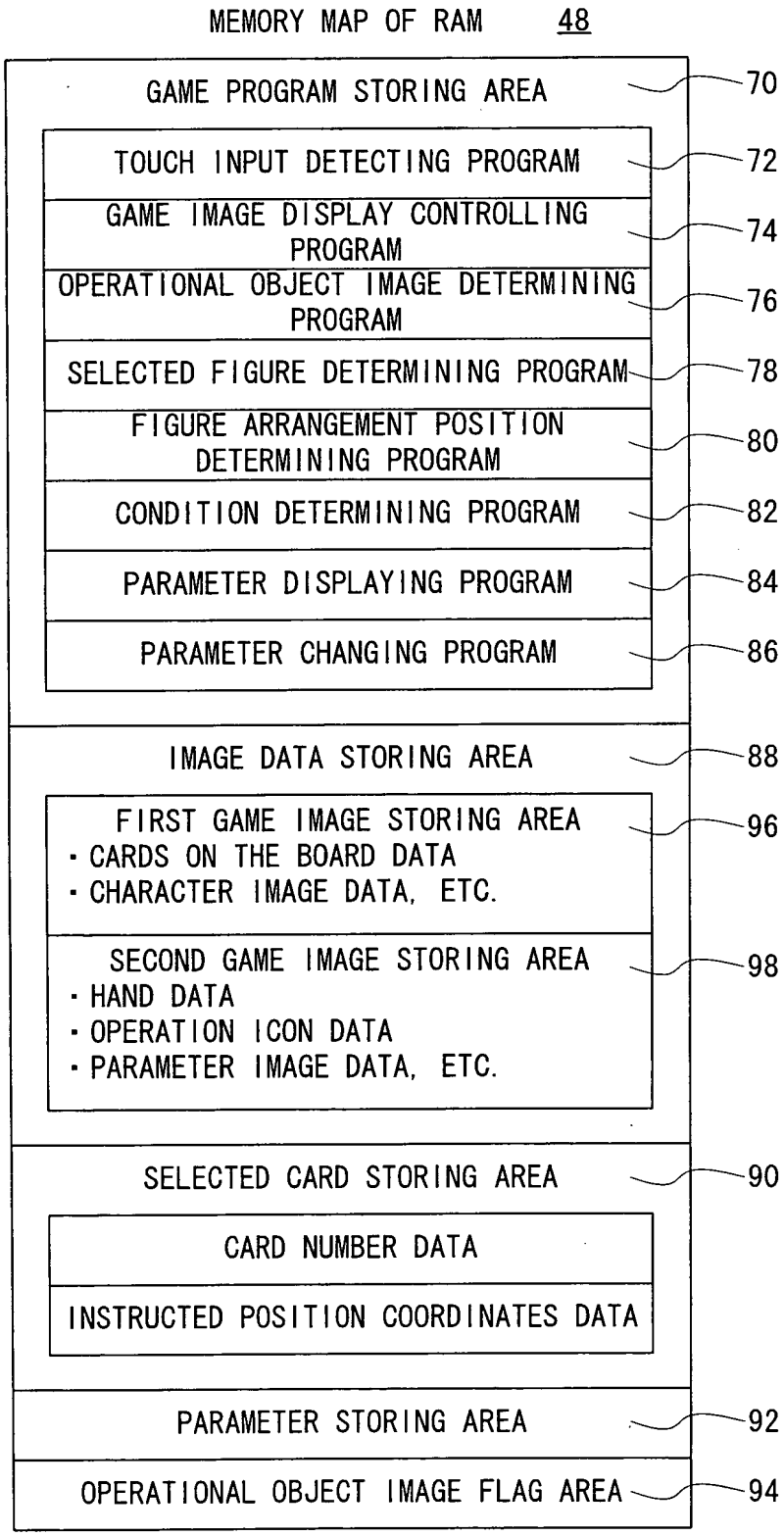

MEMORY MAP OF RAM 48
GAME PROGRAM STORING AREA
70
TOUCH INPUT DETECTING PROGRAM
72
GAME IMAGE DISPLAY CONTROLLING PROGRAM
74
OPERATIONAL OBJECT IMAGE DETERMINING PROGRAM
76
SELECTED FIGURE DETERMINING PROGRAM
78
FIGURE ARRANGEMENT POSITION DETERMINING PROGRAM
80
CONDITION DETERMINING PROGRAM
82
PARAMETER DISPLAYING PROGRAM
84
PARAMETER CHANGING PROGRAM
86
IMAGE DATA STORING AREA
88
FIRST GAME IMAGE STORING AREA
・CARDS ON THE BOARD DATA
・CHARACTER IMAGE DATA, ETC.
96
SECOND GAME IMAGE STORING AREA
・HAND DATA
・OPERATION ICON DATA
・PARAMETER IMAGE DATA, ETC.
98
SELECTED CARD STORING AREA
90
CARD NUMBER DATA
INSTRUCTED POSITION COORDINATES DATA
PARAMETER STORING AREA
92
OPERATIONAL OBJECT IMAGE FLAG AREA
94

FIG. 4

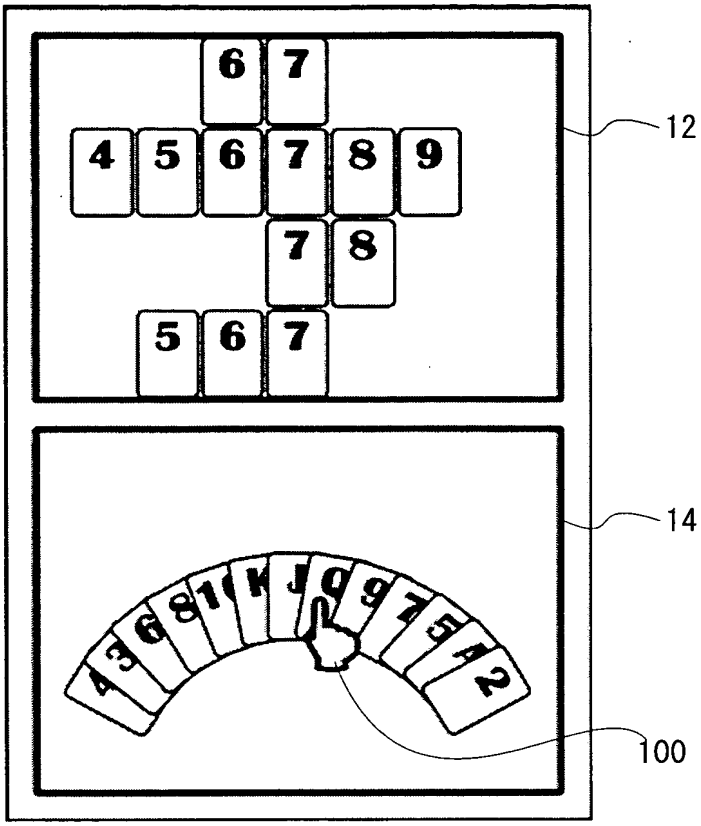


FIG. 5

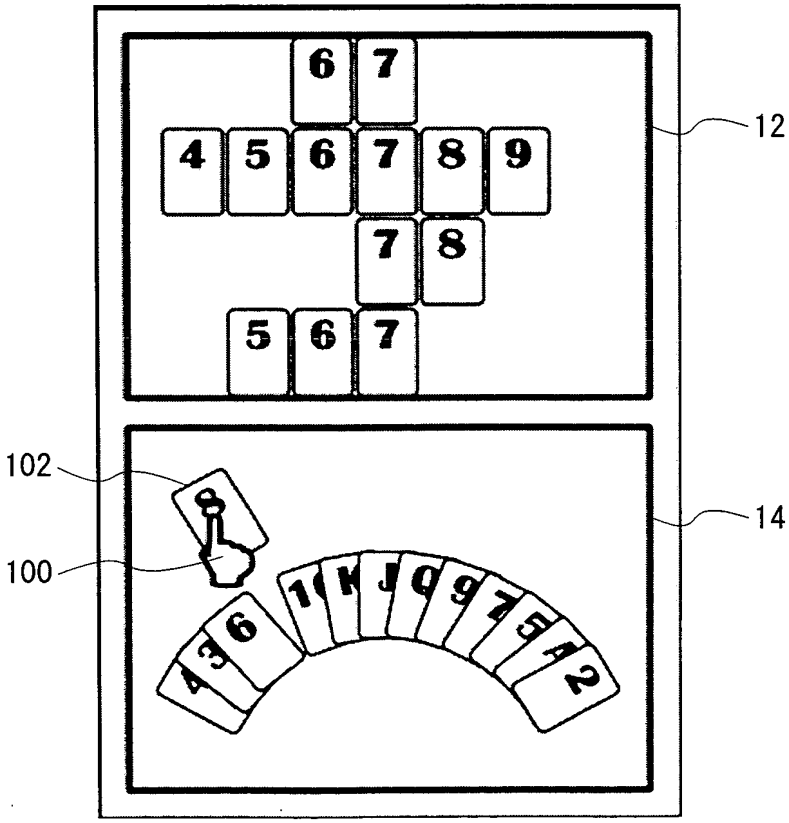


FIG. 6

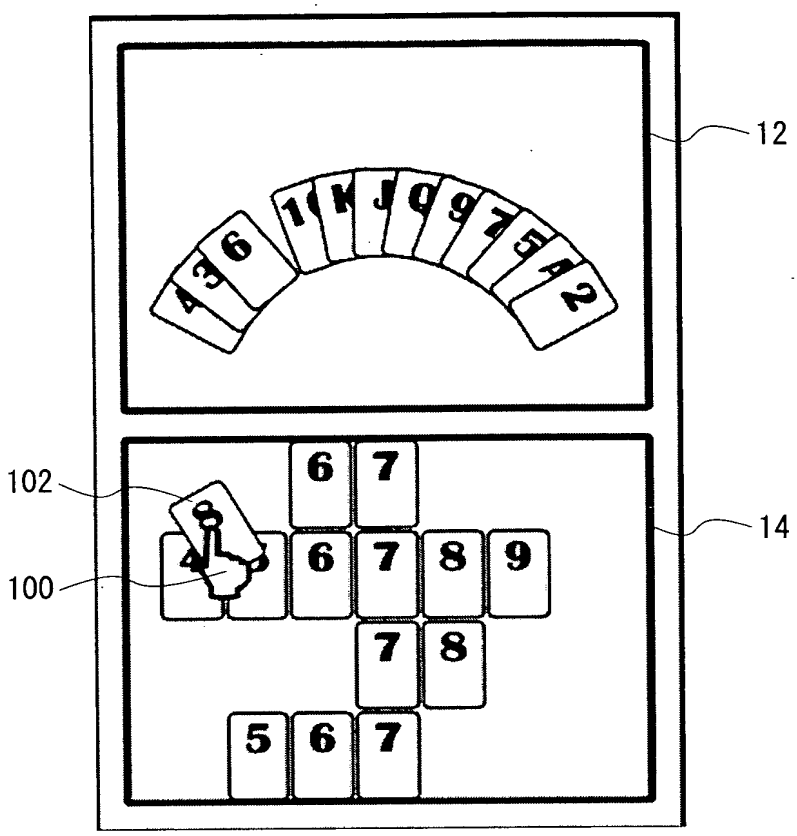


FIG. 7

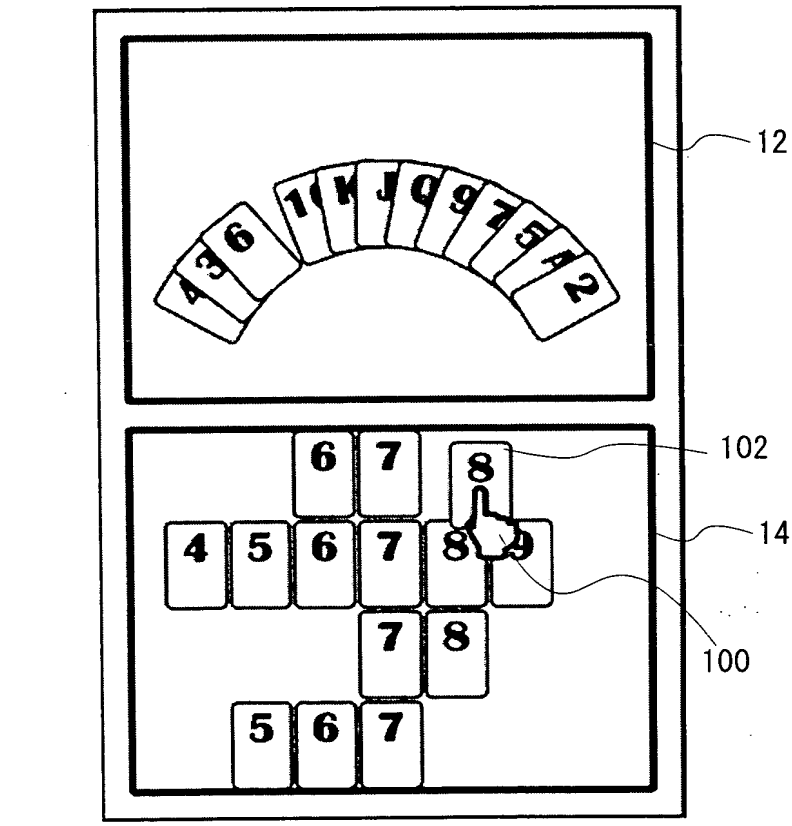


FIG. 8

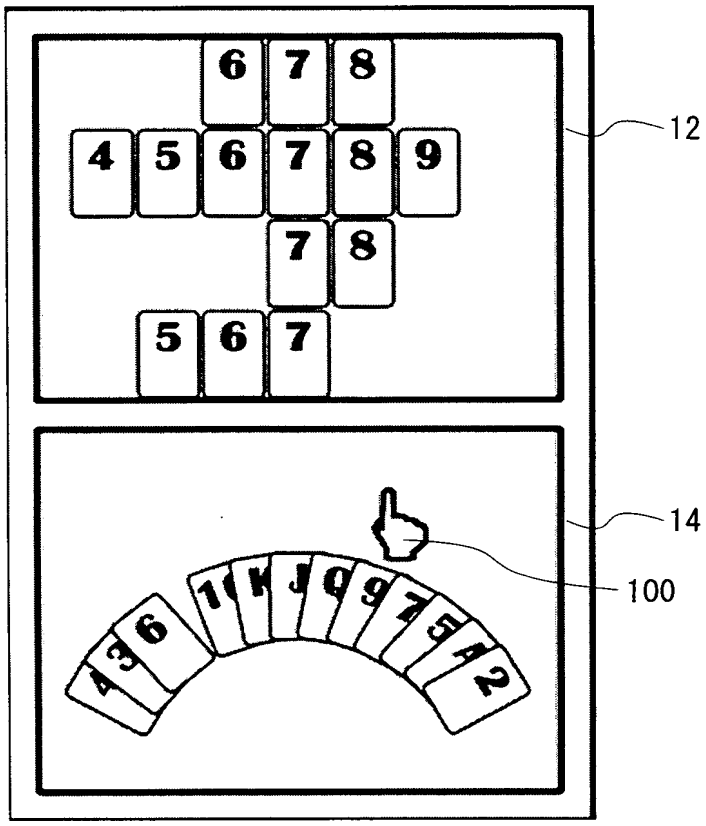


FIG. 9

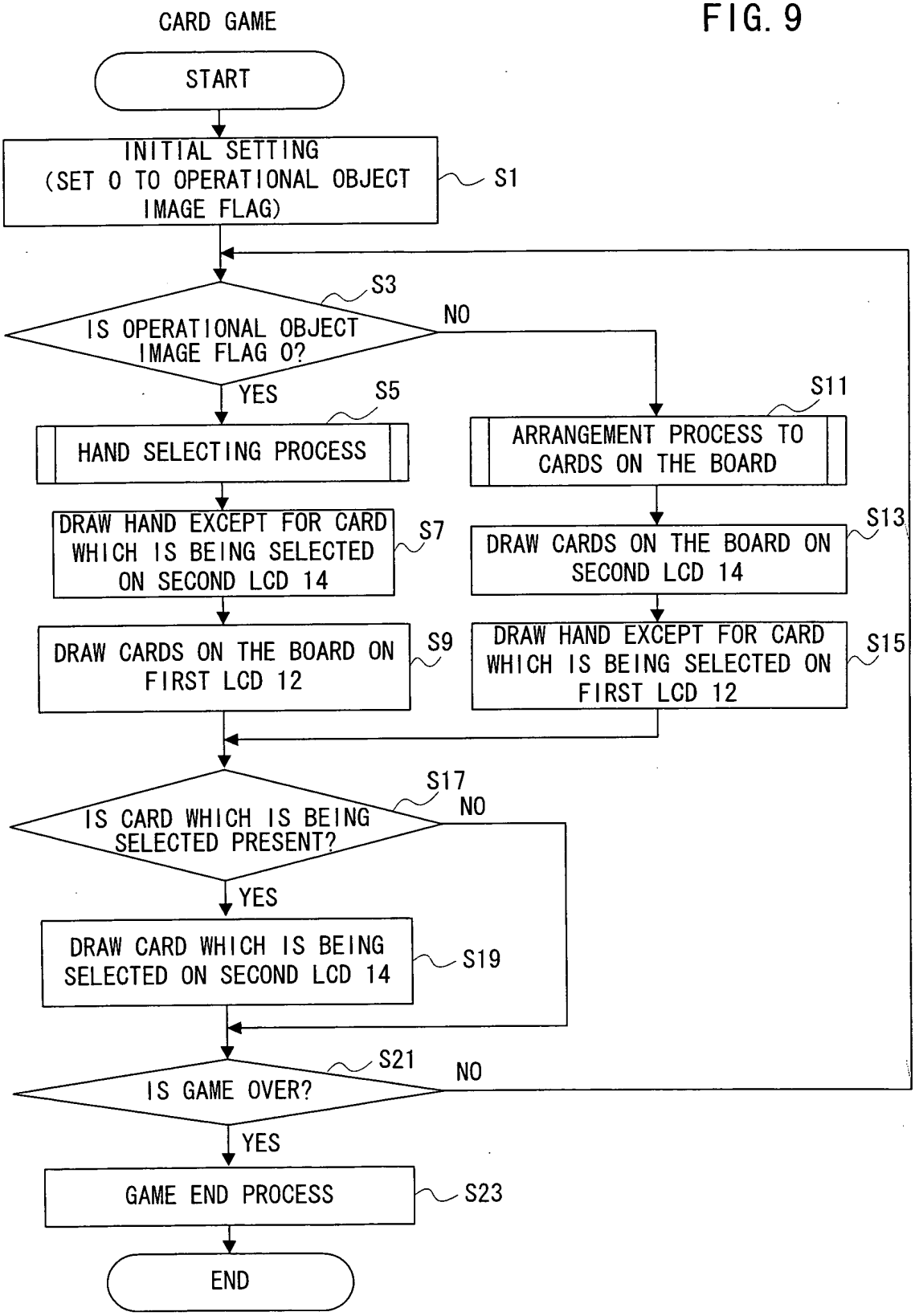

CARD GAME
START
INITIAL SETTING (SET 0 TO OPERATIONAL OBJECT IMAGE FLAG)
S1
S3
IS OPERATIONAL OBJECT IMAGE FLAG 0?
NO
YES
S5
HAND SELECTING PROCESS
S11
ARRANGEMENT PROCESS TO CARDS ON THE BOARD
DRAW HAND EXCEPT FOR CARD WHICH IS BEING SELECTED ON SECOND LCD 14
S7
DRAW CARDS ON THE BOARD ON SECOND LCD 14
S13
DRAW CARDS ON THE BOARD ON FIRST LCD 12
S9
DRAW HAND EXCEPT FOR CARD WHICH IS BEING SELECTED ON FIRST LCD 12
S15
S17
IS CARD WHICH IS BEING SELECTED PRESENT?
NO
YES
DRAW CARD WHICH IS BEING SELECTED ON SECOND LCD 14
S19
S21
IS GAME OVER?
NO
YES
GAME END PROCESS
S23
END

FIG. 10

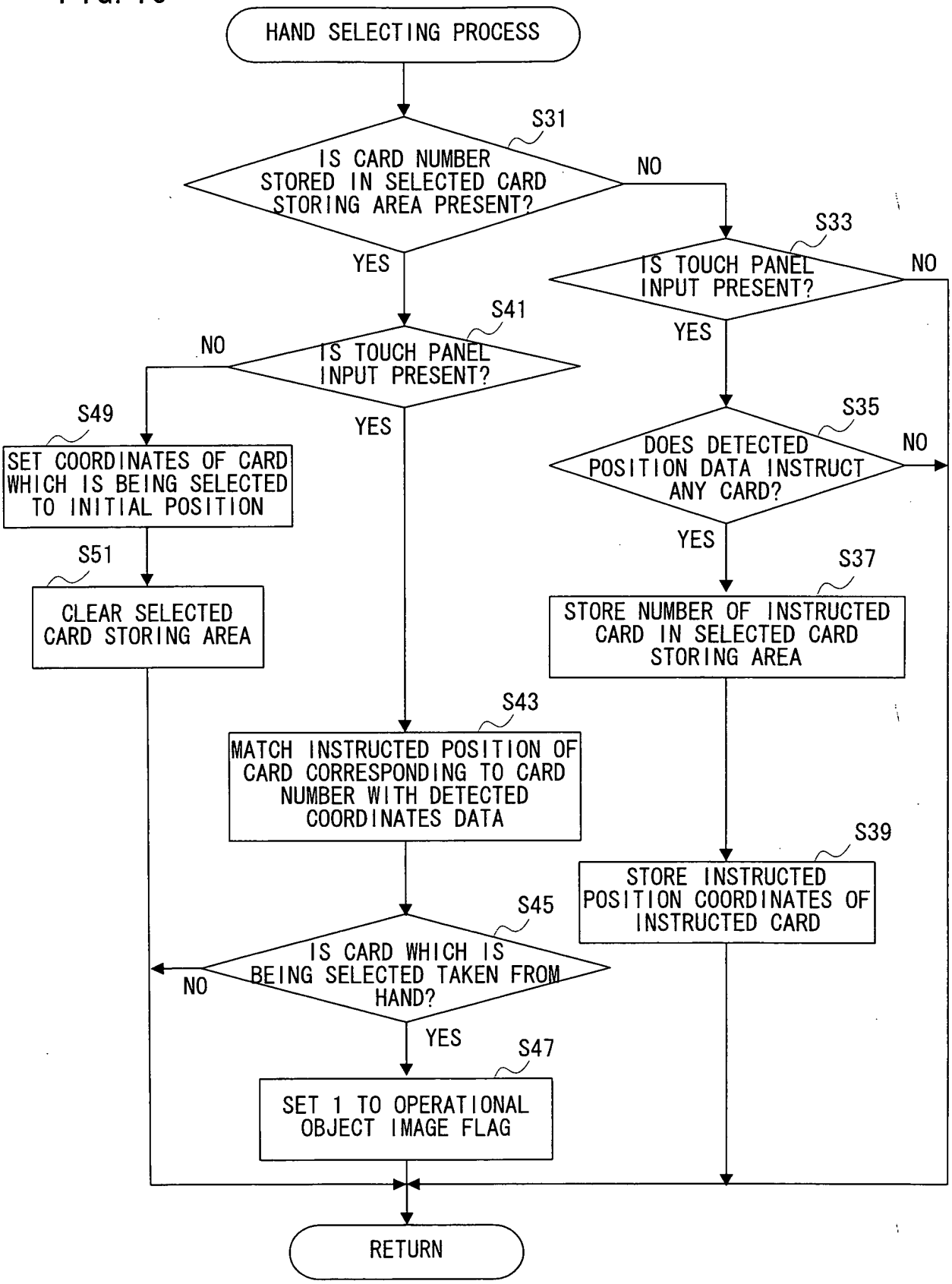

HAND SELECTING PROCESS
S31
IS CARD NUMBER STORED IN SELECTED CARD STORING AREA PRESENT?
NO
YES
S33
IS TOUCH PANEL INPUT PRESENT?
NO
YES
S41
IS TOUCH PANEL INPUT PRESENT?
NO
YES
S49
SET COORDINATES OF CARD WHICH IS BEING SELECTED TO INITIAL POSITION
S51
CLEAR SELECTED CARD STORING AREA
S35
DOES DETECTED POSITION DATA INSTRUCT ANY CARD?
NO
YES
S37
STORE NUMBER OF INSTRUCTED CARD IN SELECTED CARD STORING AREA
S43
MATCH INSTRUCTED POSITION OF CARD CORRESPONDING TO CARD NUMBER WITH DETECTED COORDINATES DATA
S39
STORE INSTRUCTED POSITION COORDINATES OF INSTRUCTED CARD
S45
IS CARD WHICH IS BEING SELECTED TAKEN FROM HAND?
NO
YES
S47
SET 1 TO OPERATIONAL OBJECT IMAGE FLAG
RETURN

FIG. 11

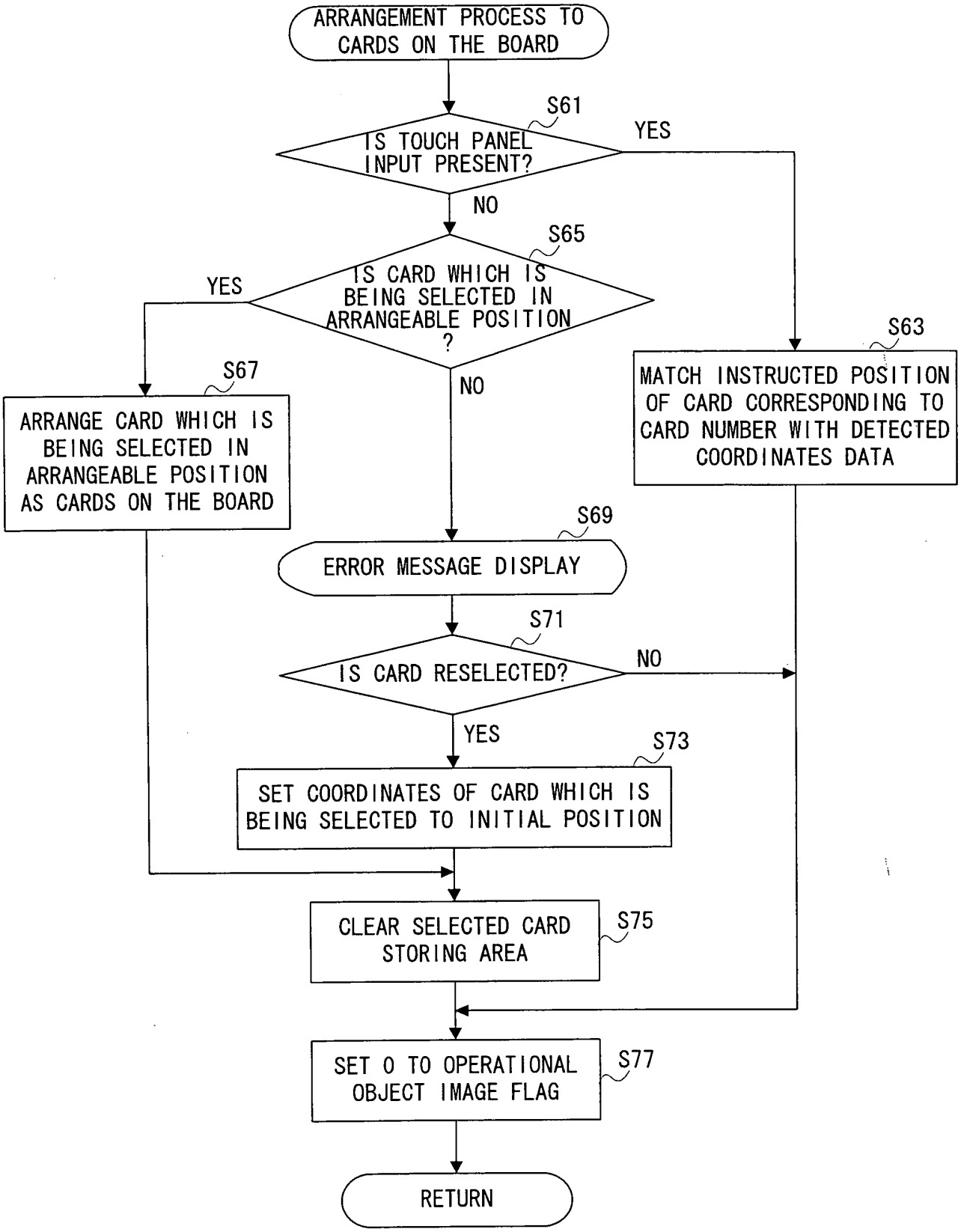

ARRANGEMENT PROCESS TO CARDS ON THE BOARD
S61
IS TOUCH PANEL INPUT PRESENT?
YES
NO
S65
IS CARD WHICH IS BEING SELECTED IN ARRANGEABLE POSITION ?
YES
NO
S67
ARRANGE CARD WHICH IS BEING SELECTED IN ARRANGEABLE POSITION AS CARDS ON THE BOARD
S63
MATCH INSTRUCTED POSITION OF CARD CORRESPONDING TO CARD NUMBER WITH DETECTED COORDINATES DATA
S69
ERROR MESSAGE DISPLAY
S71
IS CARD RESELECTED?
NO
YES
S73
SET COORDINATES OF CARD WHICH IS BEING SELECTED TO INITIAL POSITION
CLEAR SELECTED CARD STORING AREA
S75
SET 0 TO OPERATIONAL OBJECT IMAGE FLAG
S77
RETURN

FIG. 12

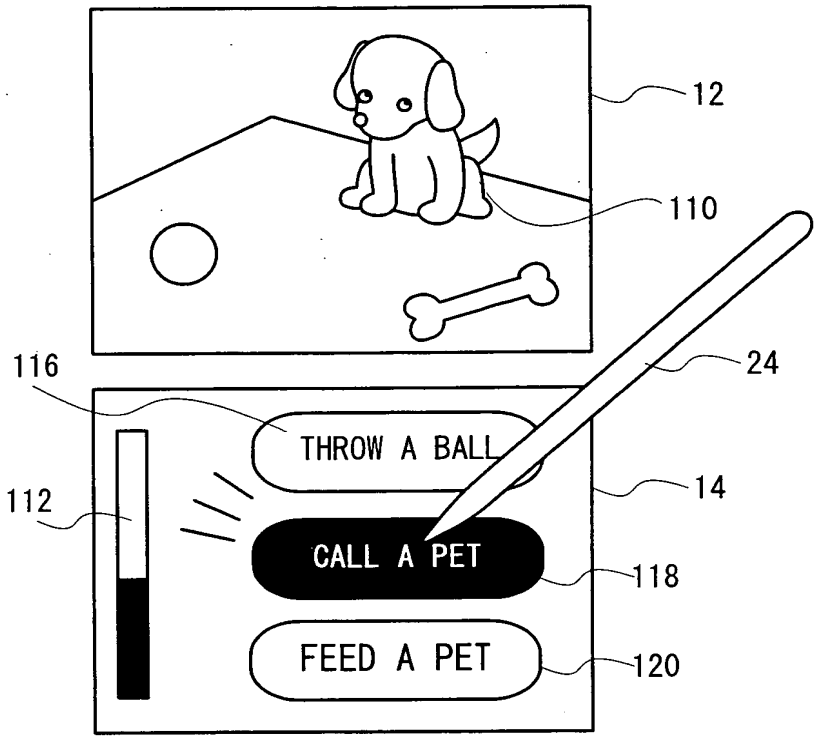

12
110
116
24
THROW A BALL
112
14
CALL A PET
118
FEED A PET
120

FIG. 13

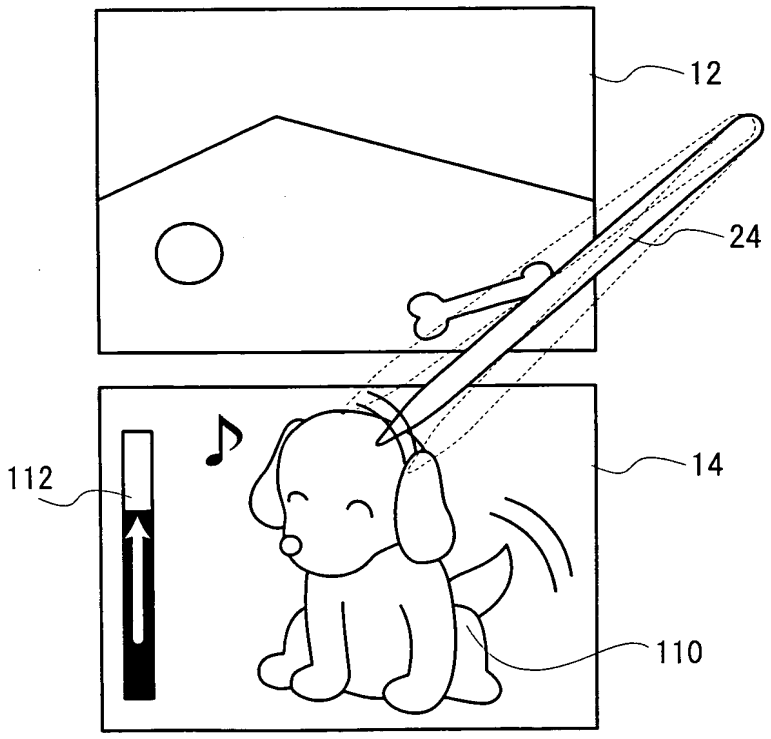

12
24
112
14
110

FIG. 14

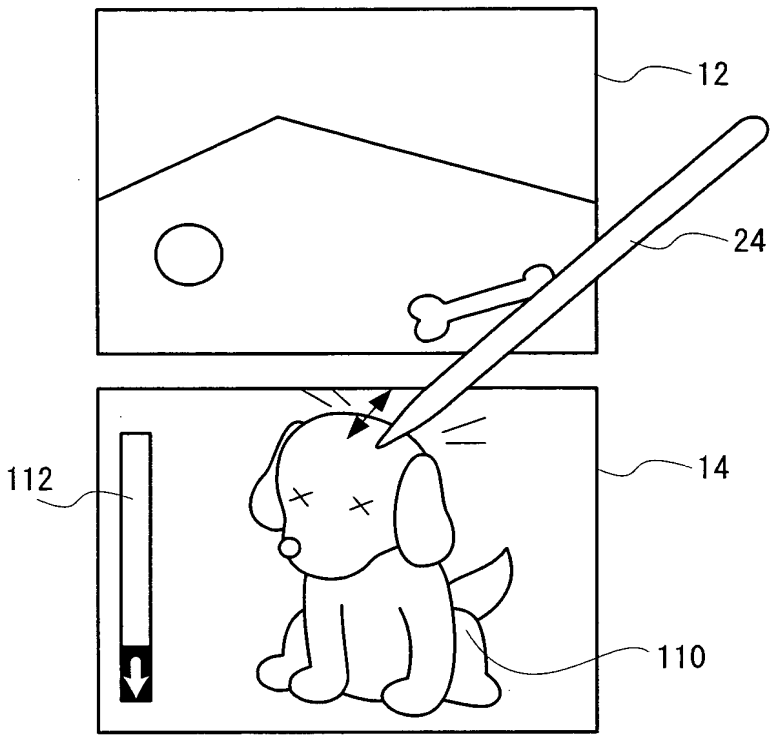

12
24
112
14
110

FIG. 15

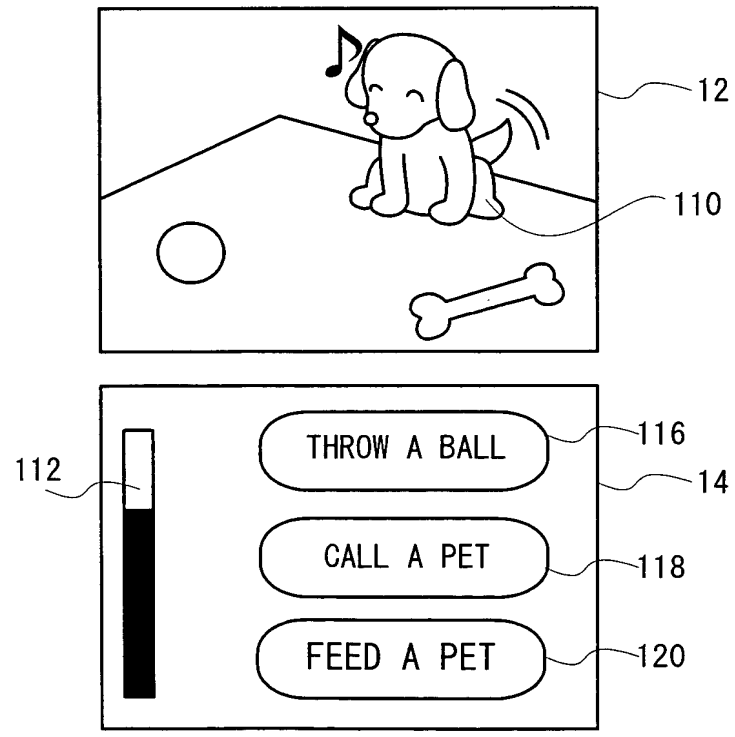

12
110
112
THROW A BALL
116
14
CALL A PET
118
FEED A PET
120

FIG. 16

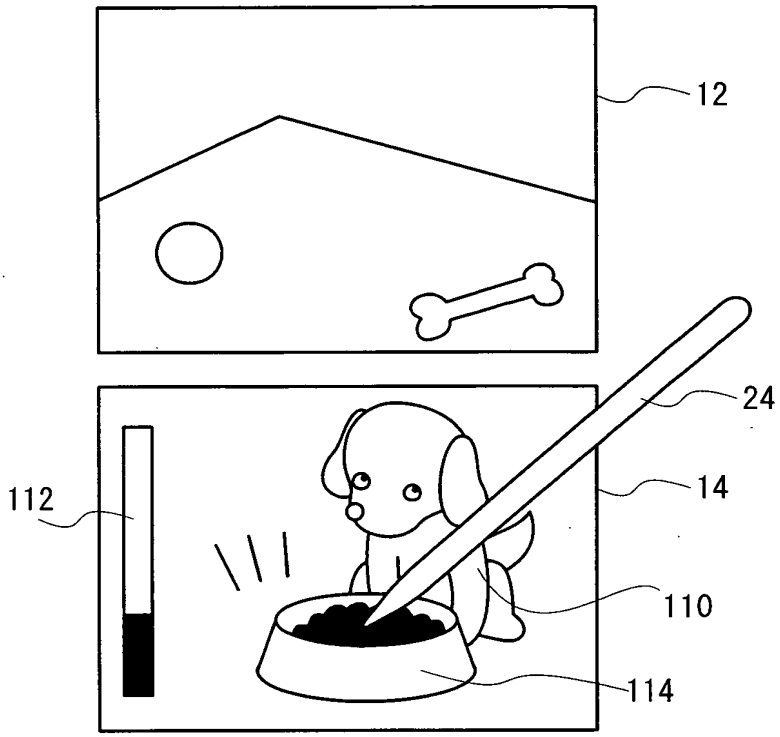
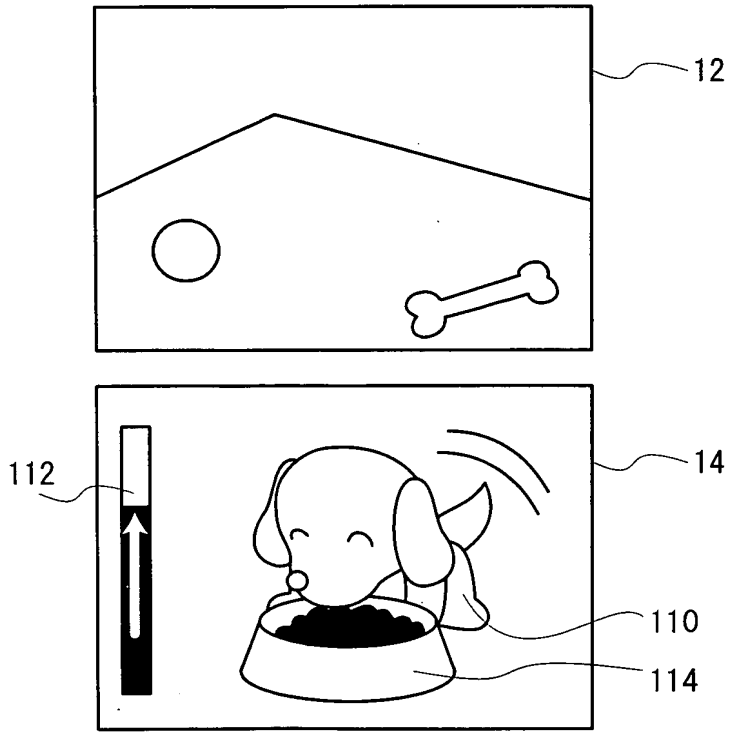


FIG. 17



PET-RAISING SIMULATION GAME

FIG. 18

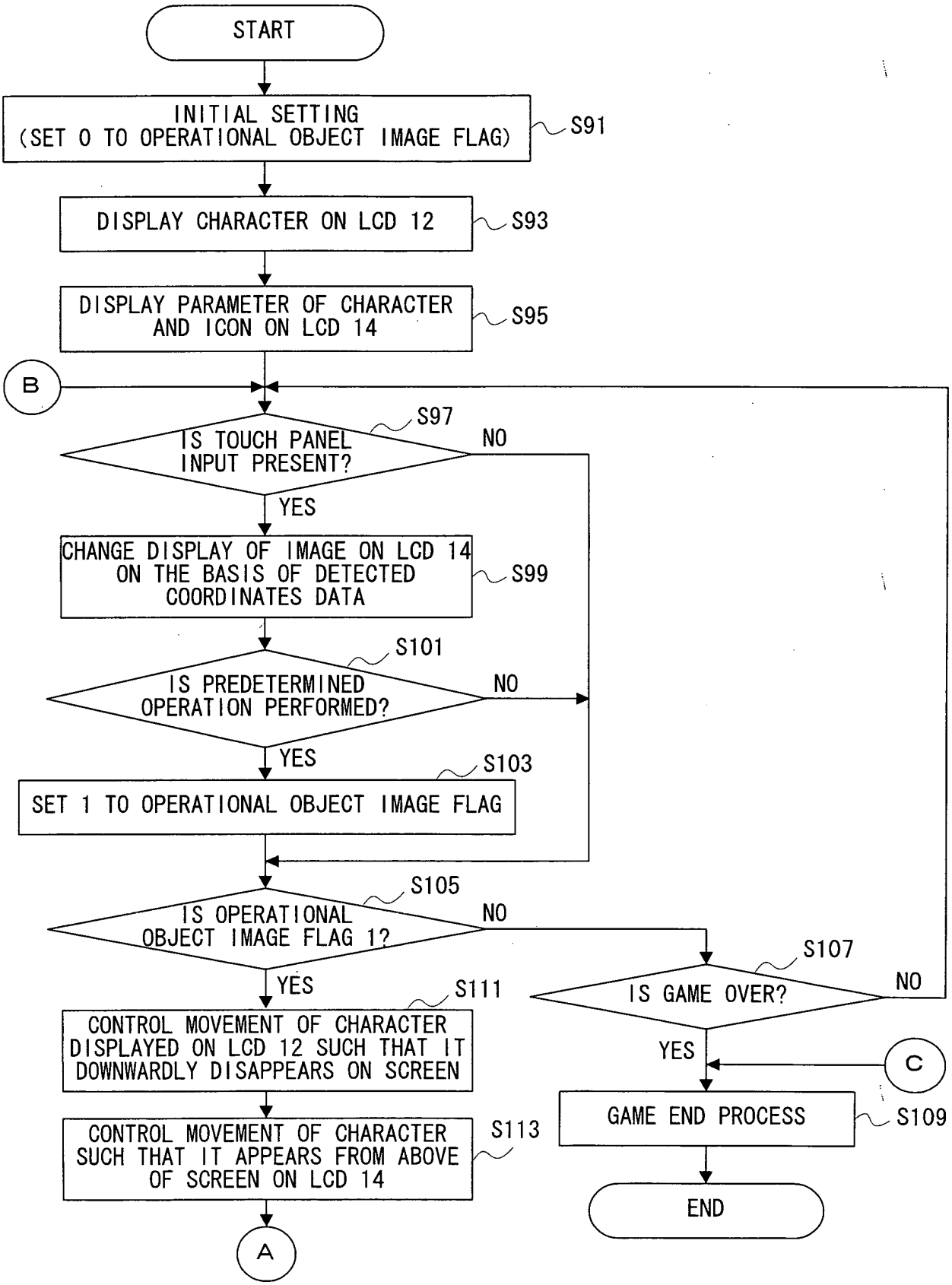


FIG. 19

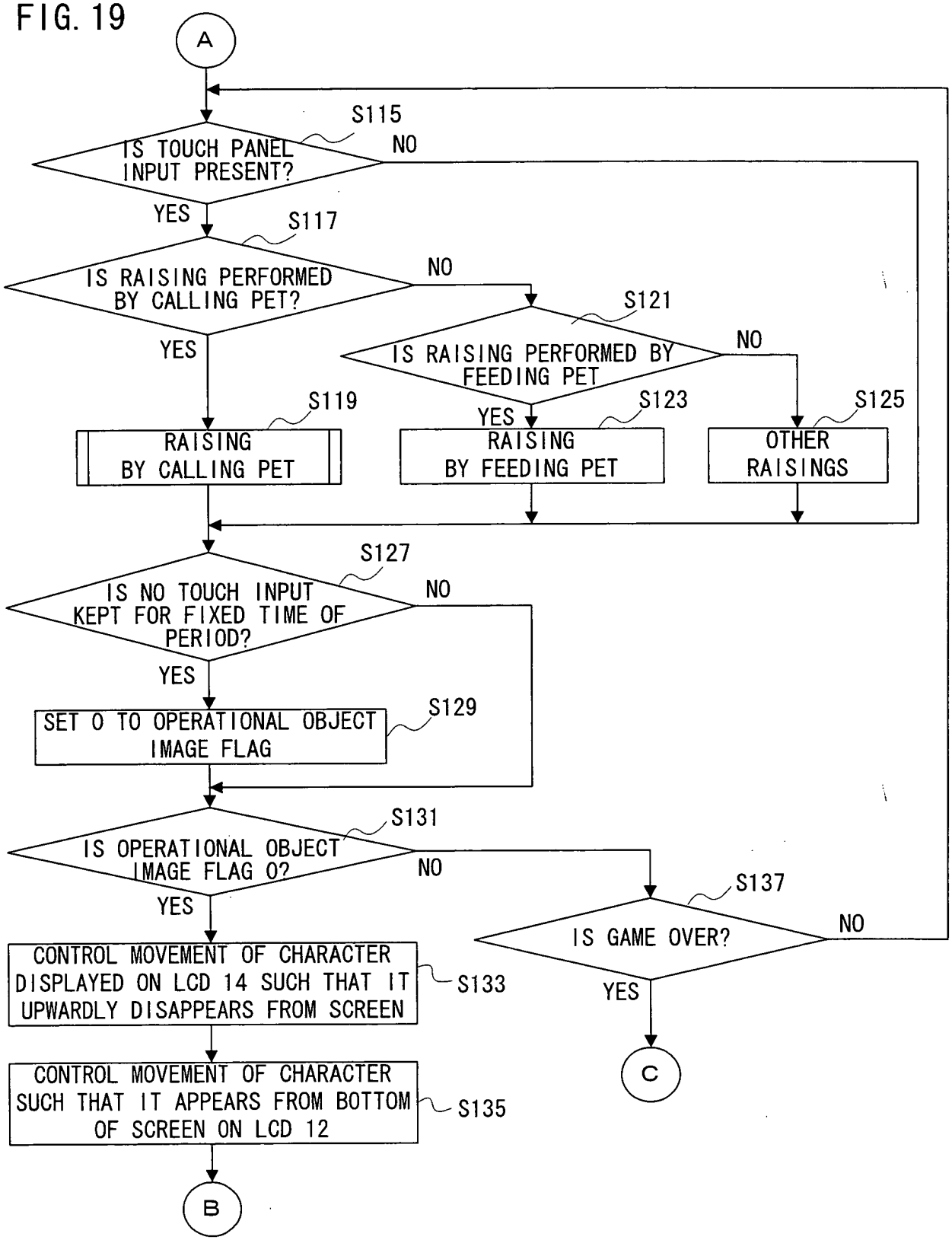

A
S115
IS TOUCH PANEL INPUT PRESENT?
NO
YES
S117
IS RAISING PERFORMED BY CALLING PET?
NO
YES
S121
IS RAISING PERFORMED BY FEEDING PET
NO
YES
S119
RAISING BY CALLING PET
S123
RAISING BY FEEDING PET
S125
OTHER RAISINGS
S127
IS NO TOUCH INPUT KEPT FOR FIXED TIME OF PERIOD?
NO
YES
S129
SET 0 TO OPERATIONAL OBJECT IMAGE FLAG
S131
IS OPERATIONAL OBJECT IMAGE FLAG 0?
NO
YES
S137
IS GAME OVER?
NO
YES
C
CONTROL MOVEMENT OF CHARACTER DISPLAYED ON LCD 14 SUCH THAT IT UPWARDLY DISAPPEARS FROM SCREEN
S133
CONTROL MOVEMENT OF CHARACTER SUCH THAT IT APPEARS FROM BOTTOM OF SCREEN ON LCD 12
S135
B

FIG. 20

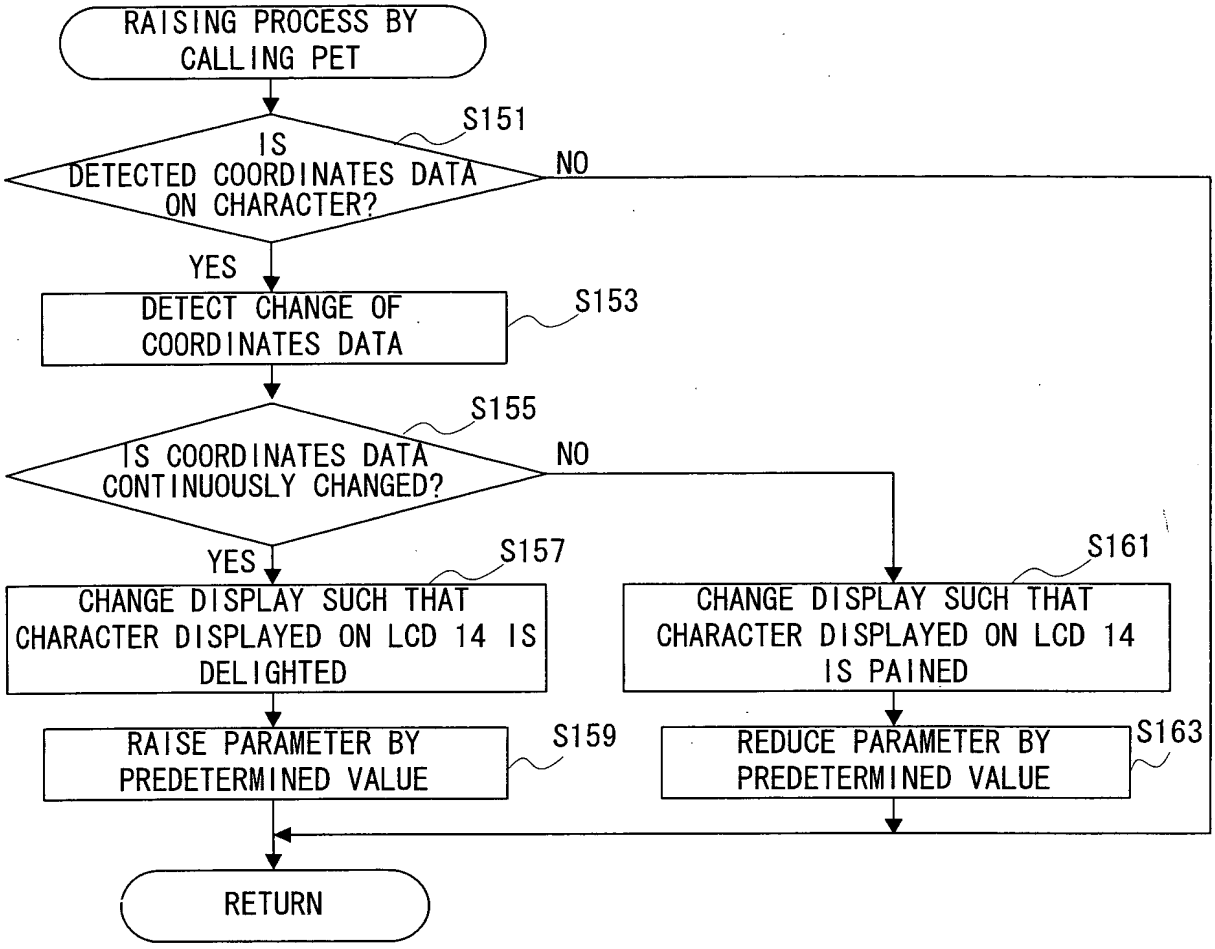
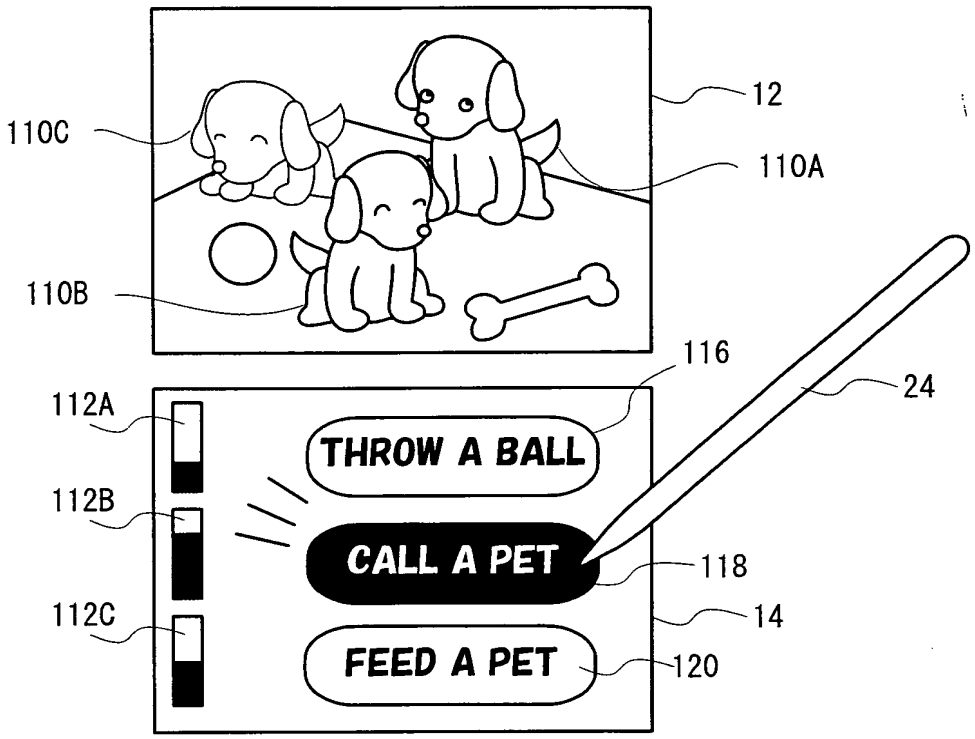

RAISING PROCESS BY CALLING PET
S151
IS DETECTED COORDINATES DATA ON CHARACTER?
NO
YES
DETECT CHANGE OF COORDINATES DATA
S153
S155
IS COORDINATES DATA CONTINUOUSLY CHANGED?
NO
YES
S157
CHANGE DISPLAY SUCH THAT CHARACTER DISPLAYED ON LCD 14 IS DELIGHTED
S161
CHANGE DISPLAY SUCH THAT CHARACTER DISPLAYED ON LCD 14 IS PAINED
RAISE PARAMETER BY PREDETERMINED VALUE
S159
REDUCE PARAMETER BY PREDETERMINED VALUE
S163
RETURN

FIG. 21

(A)


12
110C
110A
110B
116
24
112A
THROW A BALL
112B
CALL A PET
118
112C
14
FEED A PET
120

(B)

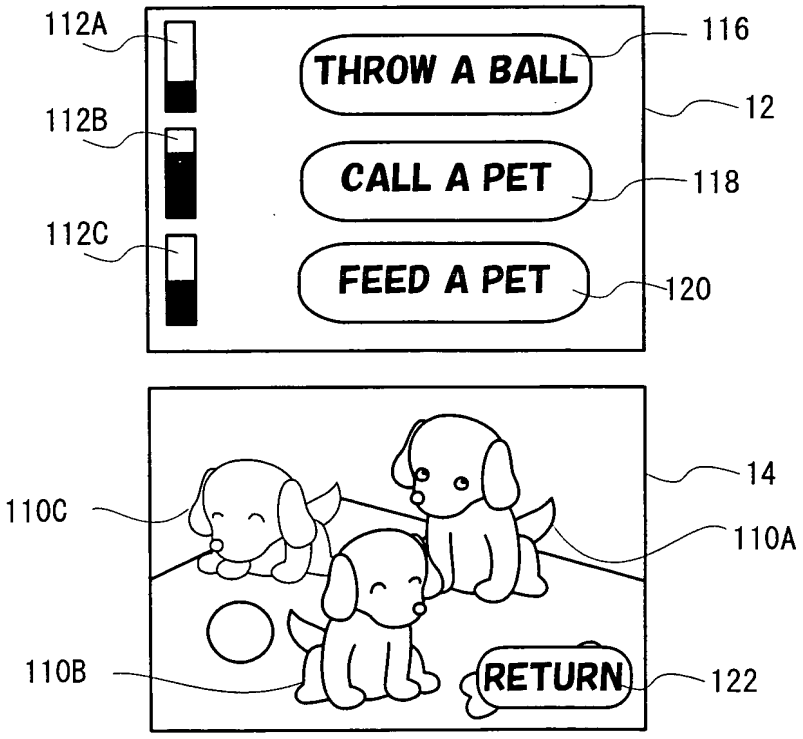
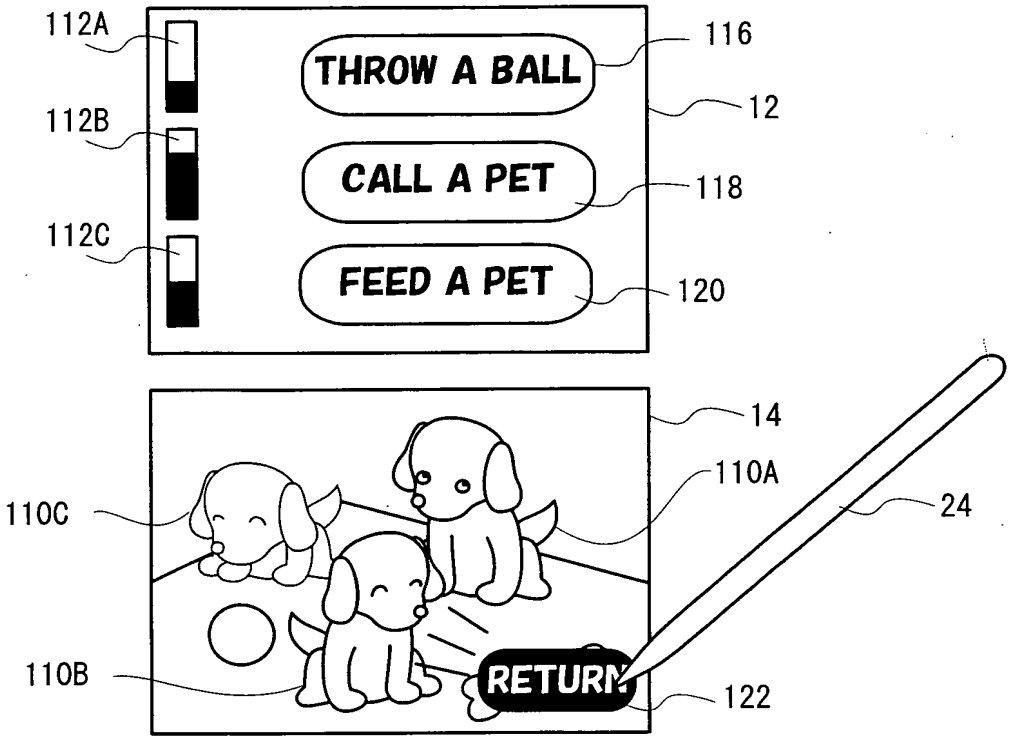
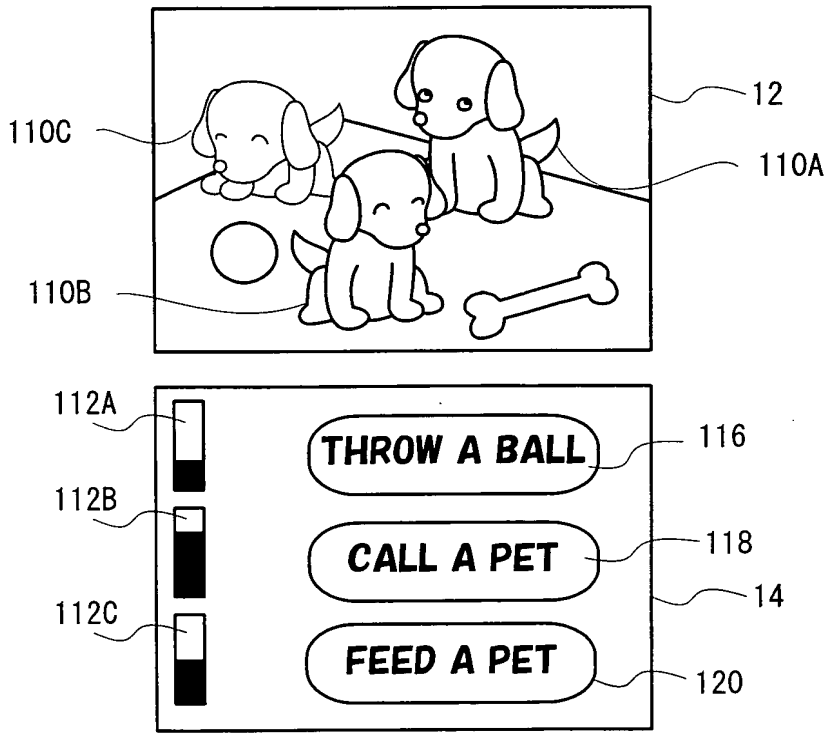

112A
116
THROW A BALL
112B
12
CALL A PET
118
112C
FEED A PET
120
14
110C
110A
110B
RETURN
122

FIG. 22

(A)


112A
112B
112C
THROW A BALL
CALL A PET
FEED A PET
116
12
118
120
14
110A
110C
110B
24
RETURN
122

(B)


12
110C
110A
110B
112A
112B
112C
THROW A BALL
CALL A PET
FEED A PET
116
118
14
120

MODIFIED EXAMPLE 1 OF PET-RAISING SIMULATION GAME

FIG. 23

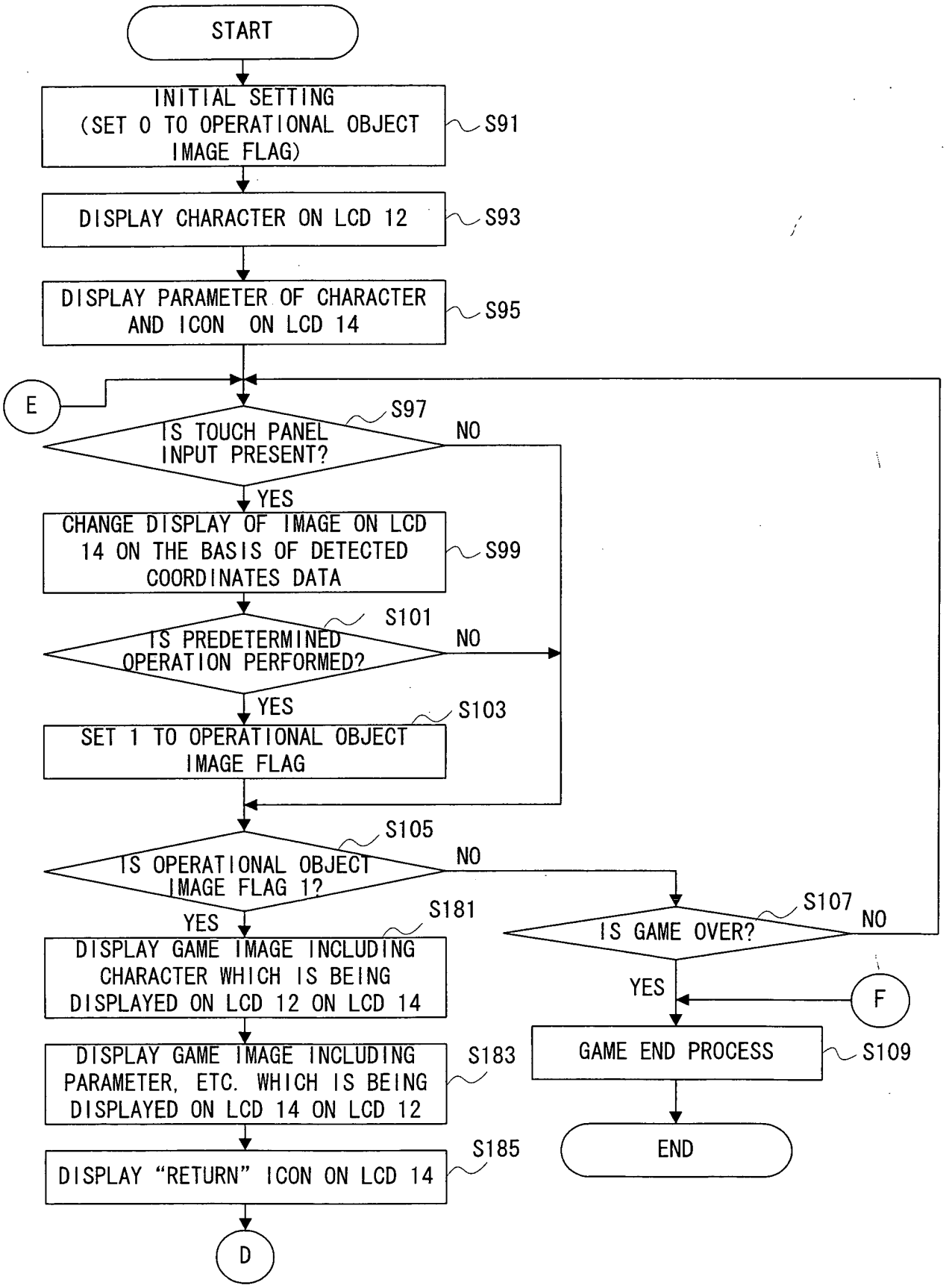


FIG. 24

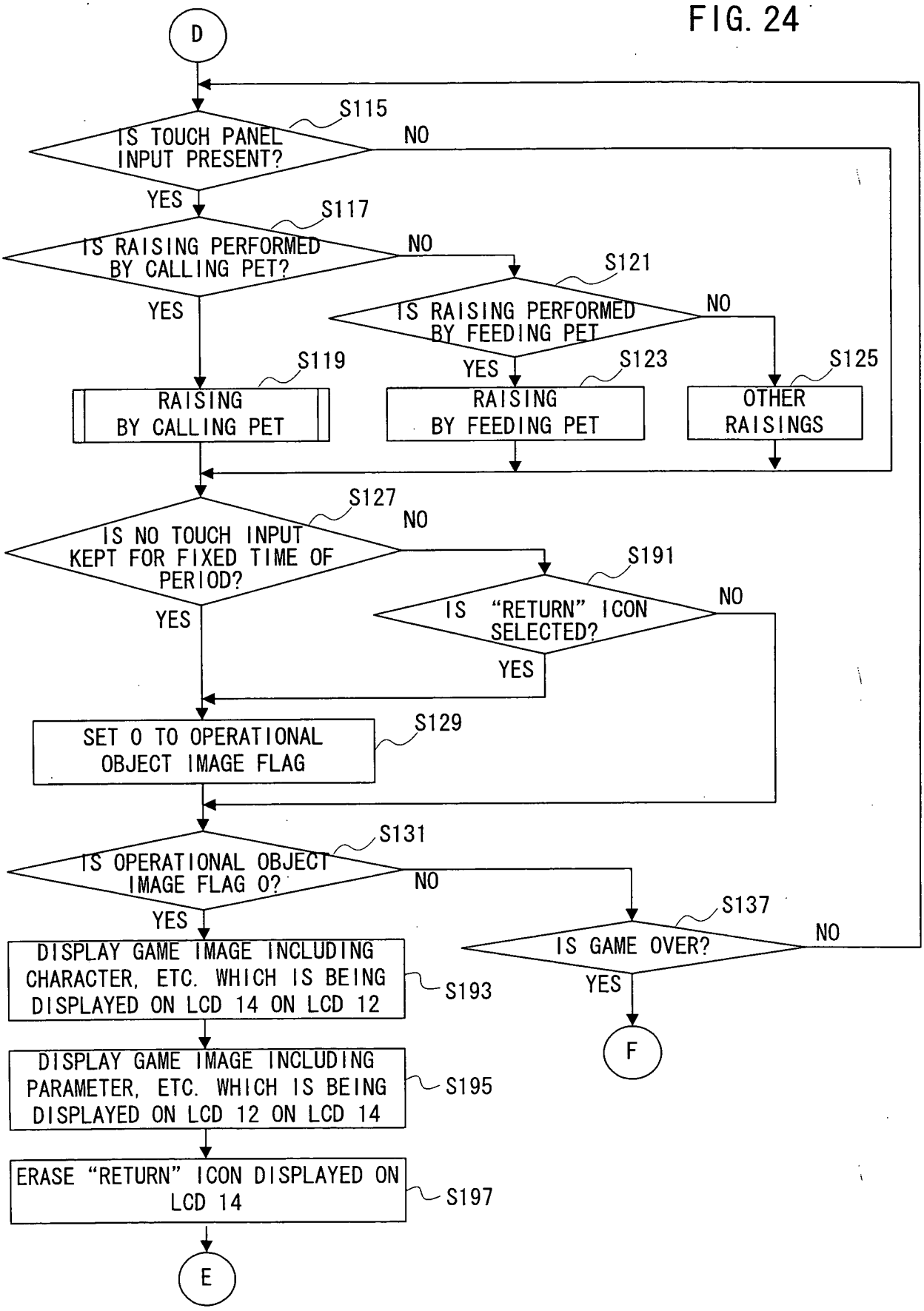

D
S115
IS TOUCH PANEL INPUT PRESENT?
NO
YES
S117
IS RAISING PERFORMED BY CALLING PET?
NO
YES
S121
IS RAISING PERFORMED BY FEEDING PET
NO
YES
S119
RAISING BY CALLING PET
S123
RAISING BY FEEDING PET
S125
OTHER RAISINGS
S127
IS NO TOUCH INPUT KEPT FOR FIXED TIME OF PERIOD?
NO
YES
S191
IS "RETURN" ICON SELECTED?
NO
YES
S129
SET 0 TO OPERATIONAL OBJECT IMAGE FLAG
S131
IS OPERATIONAL OBJECT IMAGE FLAG 0?
NO
YES
S137
IS GAME OVER?
NO
YES
F
DISPLAY GAME IMAGE INCLUDING CHARACTER, ETC. WHICH IS BEING DISPLAYED ON LCD 14 ON LCD 12
S193
DISPLAY GAME IMAGE INCLUDING PARAMETER, ETC. WHICH IS BEING DISPLAYED ON LCD 12 ON LCD 14
S195
ERASE "RETURN" ICON DISPLAYED ON LCD 14
S197
E

FIG. 25

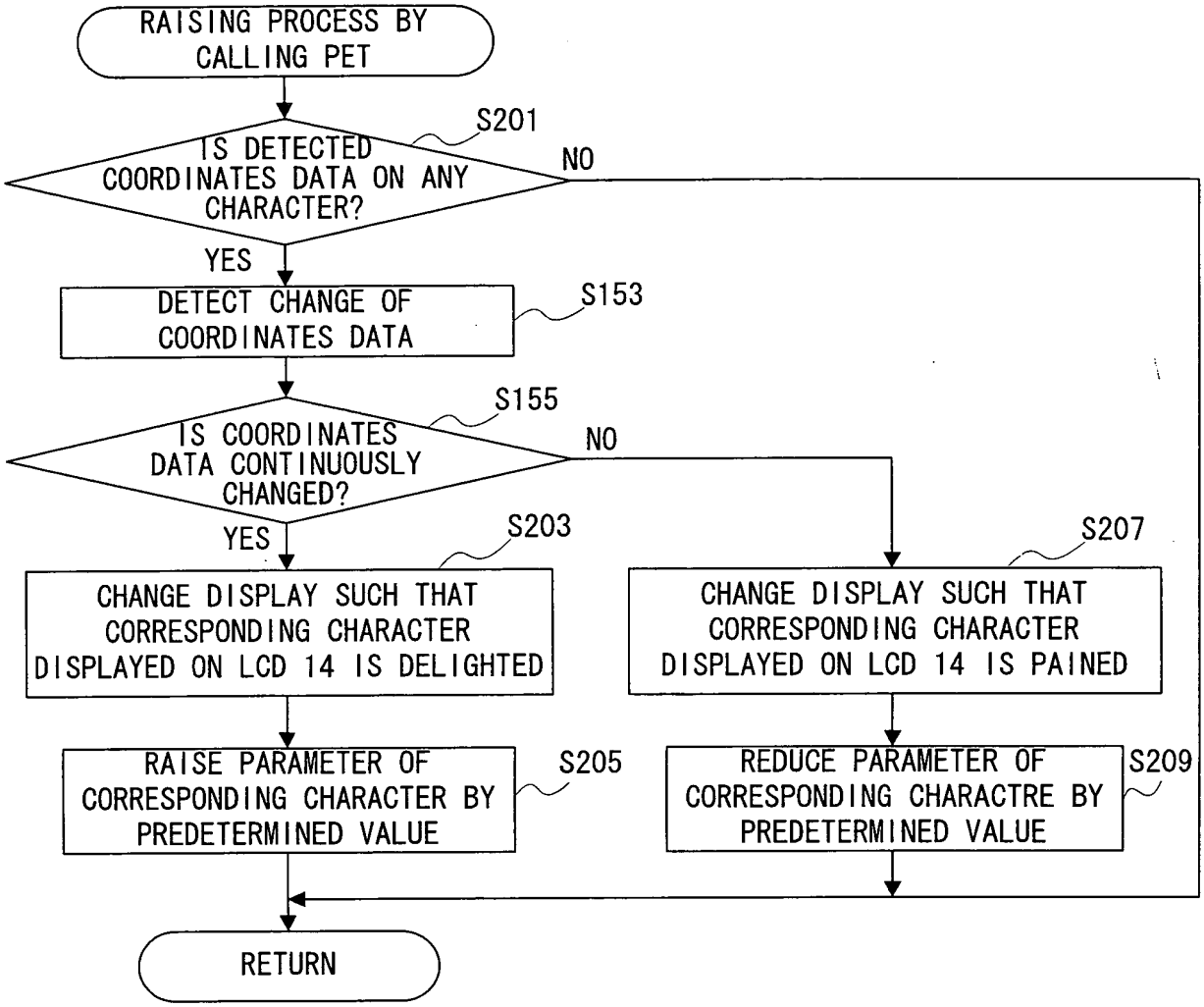
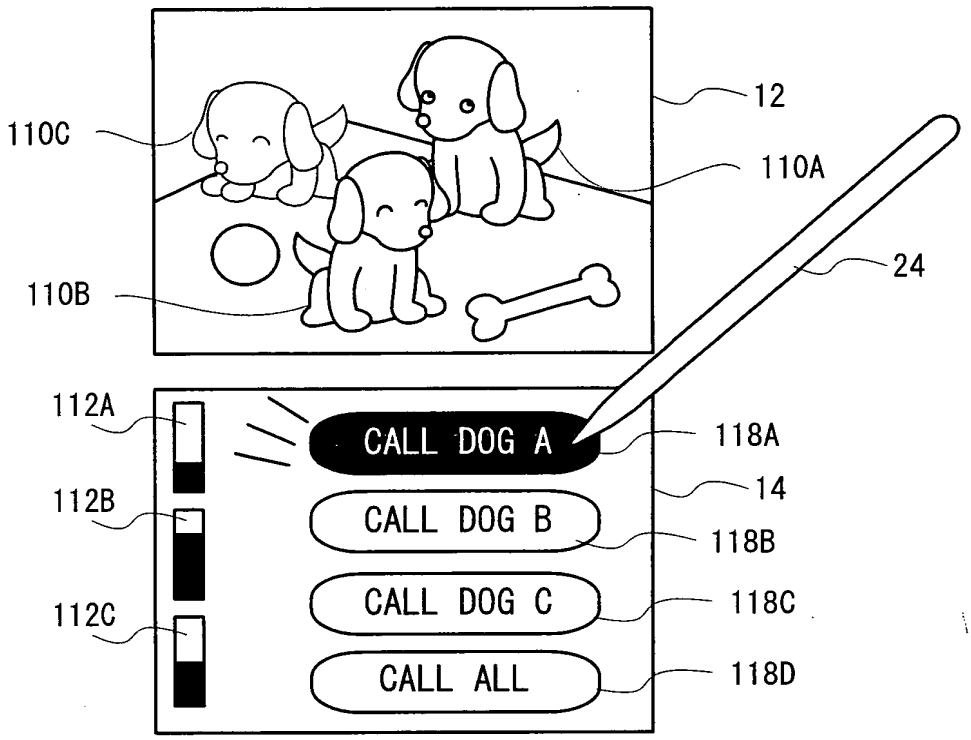

RAISING PROCESS BY CALLING PET
S201
IS DETECTED COORDINATES DATA ON ANY CHARACTER?
NO
YES
DETECT CHANGE OF COORDINATES DATA
S153
S155
IS COORDINATES DATA CONTINUOUSLY CHANGED?
NO
YES
S203
CHANGE DISPLAY SUCH THAT CORRESPONDING CHARACTER DISPLAYED ON LCD 14 IS DELIGHTED
S207
CHANGE DISPLAY SUCH THAT CORRESPONDING CHARACTER DISPLAYED ON LCD 14 IS PAINED
RAISE PARAMETER OF CORRESPONDING CHARACTER BY PREDETERMINED VALUE
S205
REDUCE PARAMETER OF CORRESPONDING CHARACTRE BY PREDETERMINED VALUE
S209
RETURN

FIG. 26

(A)


12
110C
110A
24
110B
112A
CALL DOG A
118A
14
112B
CALL DOG B
118B
112C
CALL DOG C
118C
CALL ALL
118D

(B)

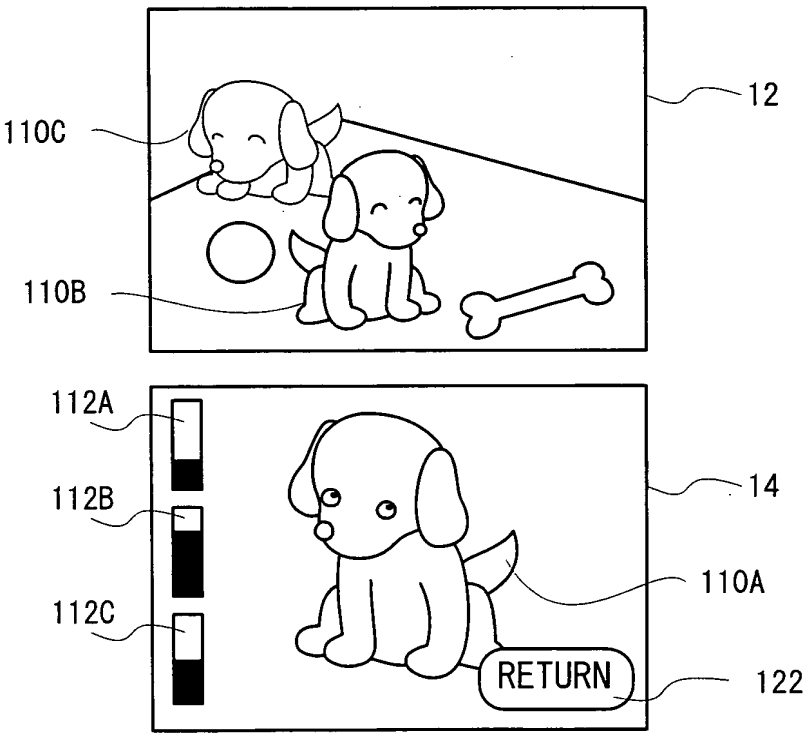
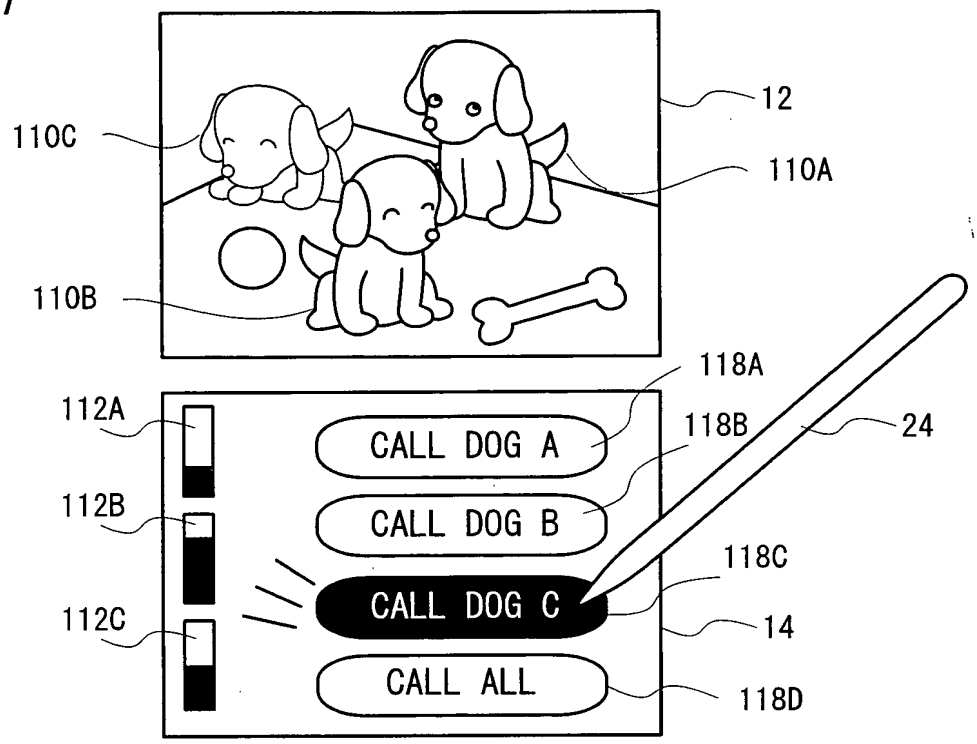

12
110C
110B
112A
14
112B
110A
112C
RETURN
122

FIG. 27

(A)


12
110C
110A
110B
118A
112A
CALL DOG A
118B
24
112B
CALL DOG B
118C
CALL DOG C
112C
14
CALL ALL
118D

(B)

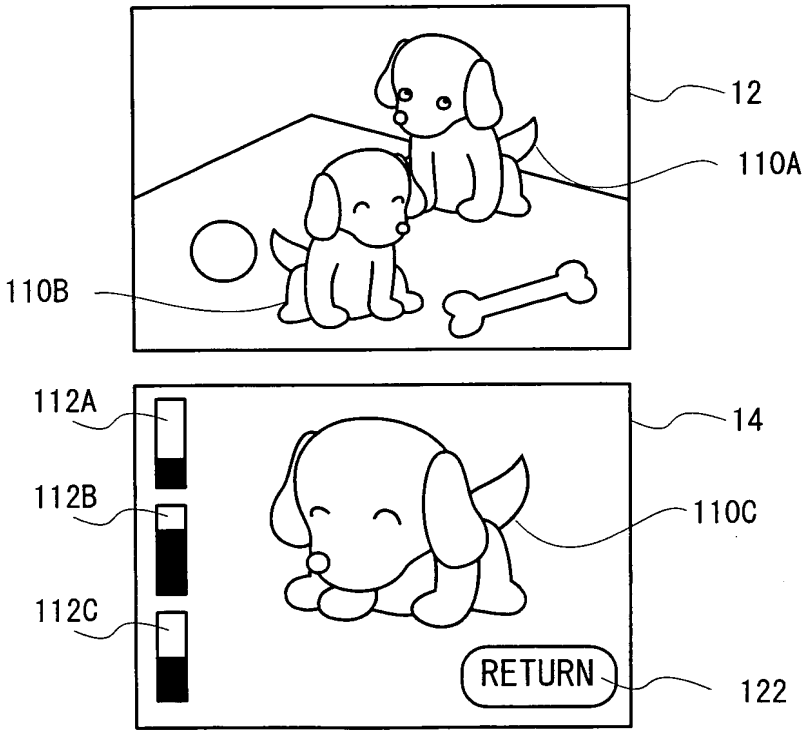
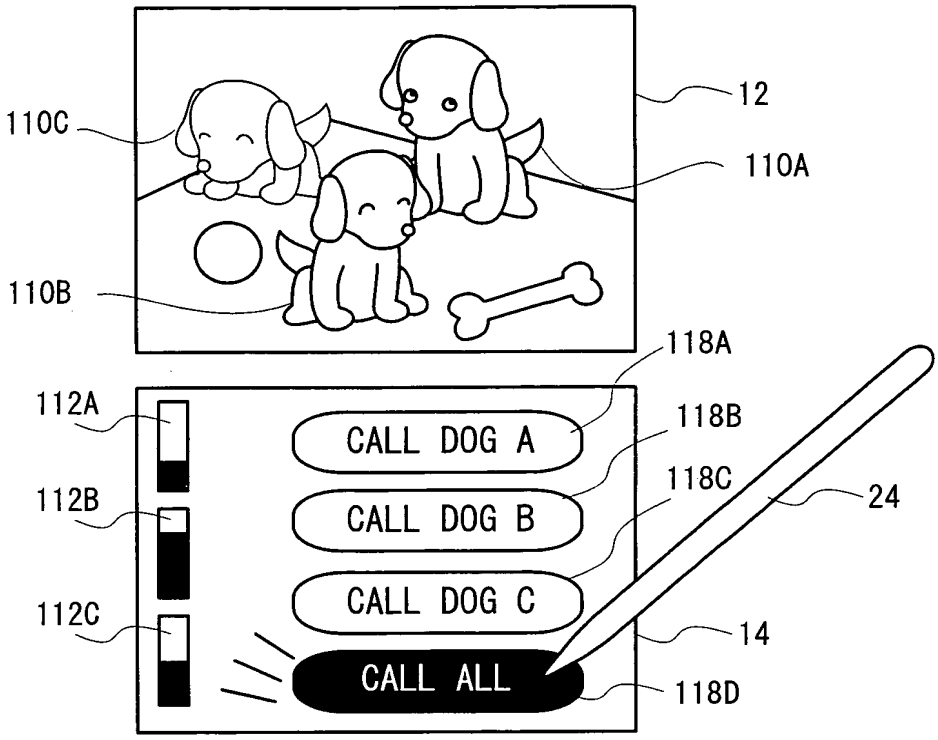

12
110A
110B
112A
14
112B
110C
112C
RETURN
122

FIG. 28

(A)


110C
12
110A
110B
118A
112A
CALL DOG A
118B
112B
CALL DOG B
118C
24
112C
CALL DOG C
14
CALL ALL
118D

(B)

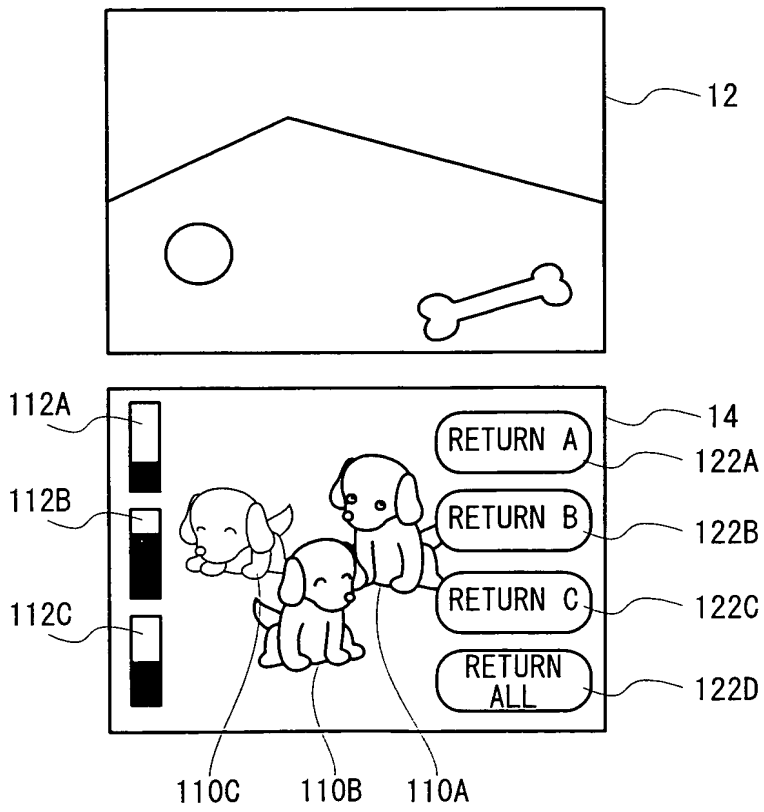
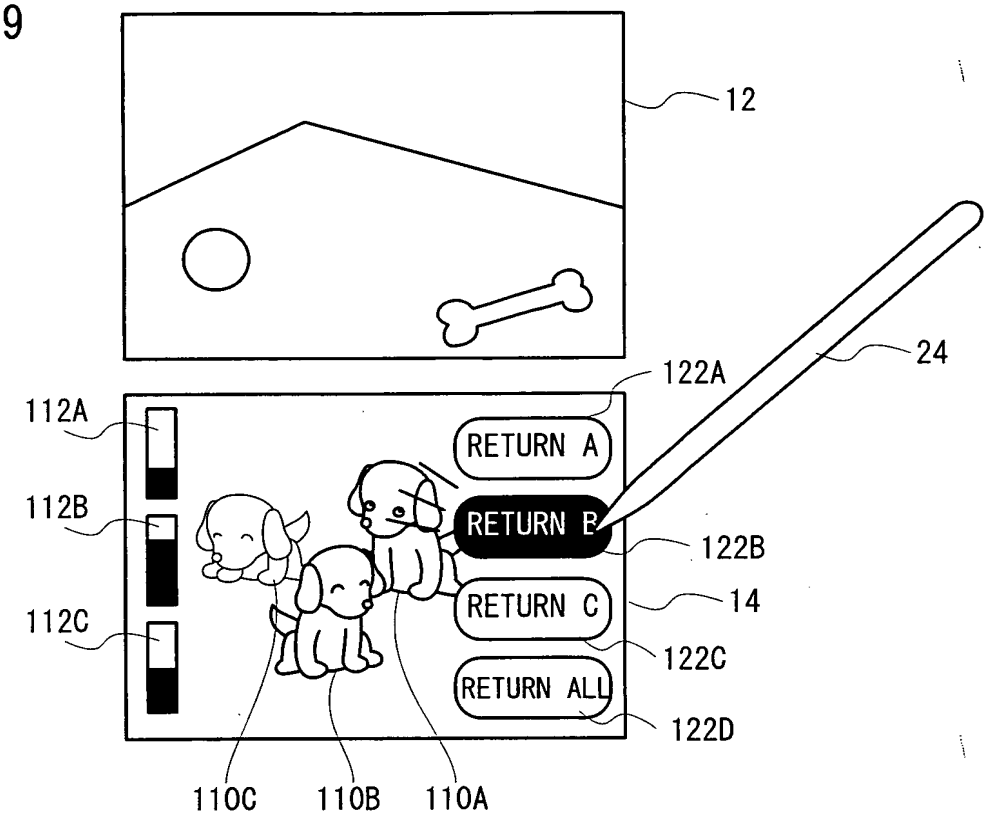

12
112A
14
RETURN A
122A
112B
RETURN B
122B
RETURN C
122C
112C
RETURN ALL
122D
110C
110B
110A

FIG. 29

(A)


12
24
122A
112A
RETURN A
112B
RETURN B
122B
RETURN C
14
112C
122C
RETURN ALL
122D
110C
110B
110A

(B)

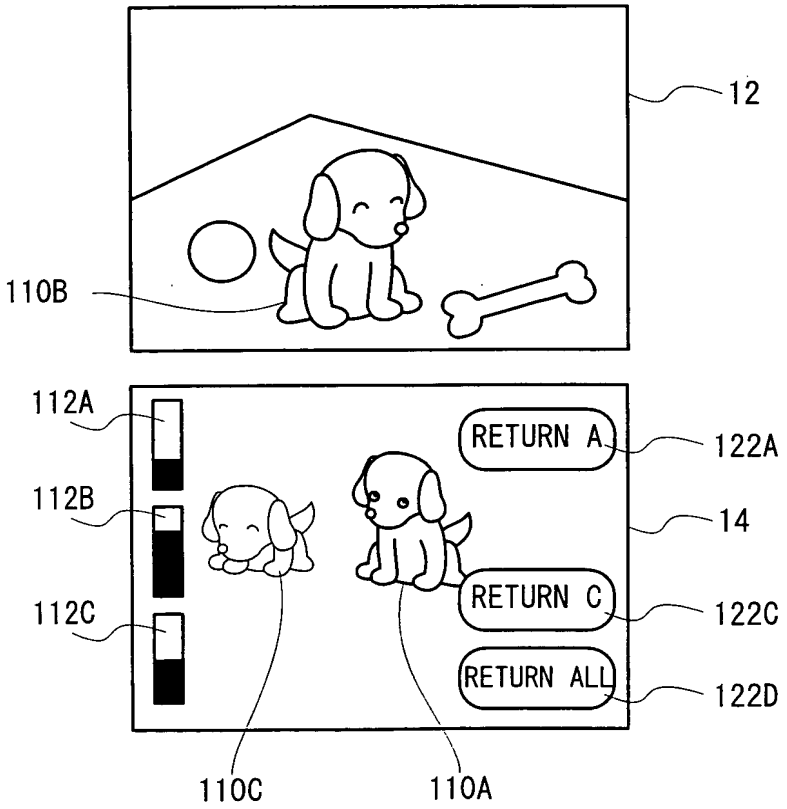
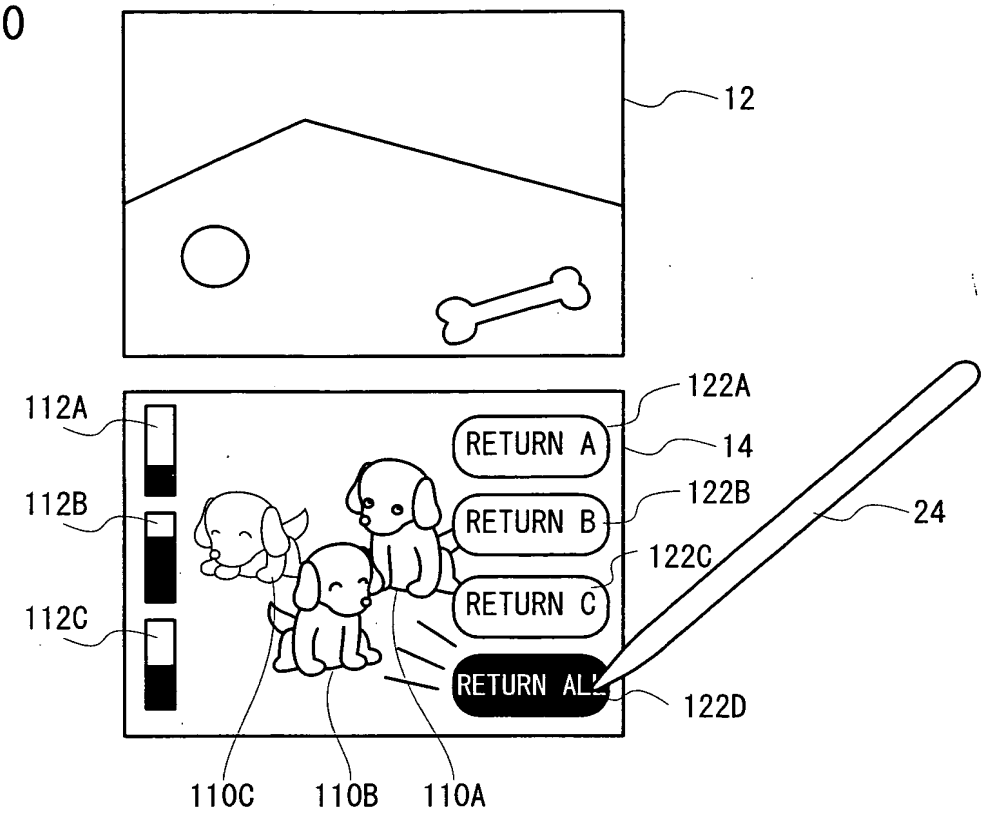
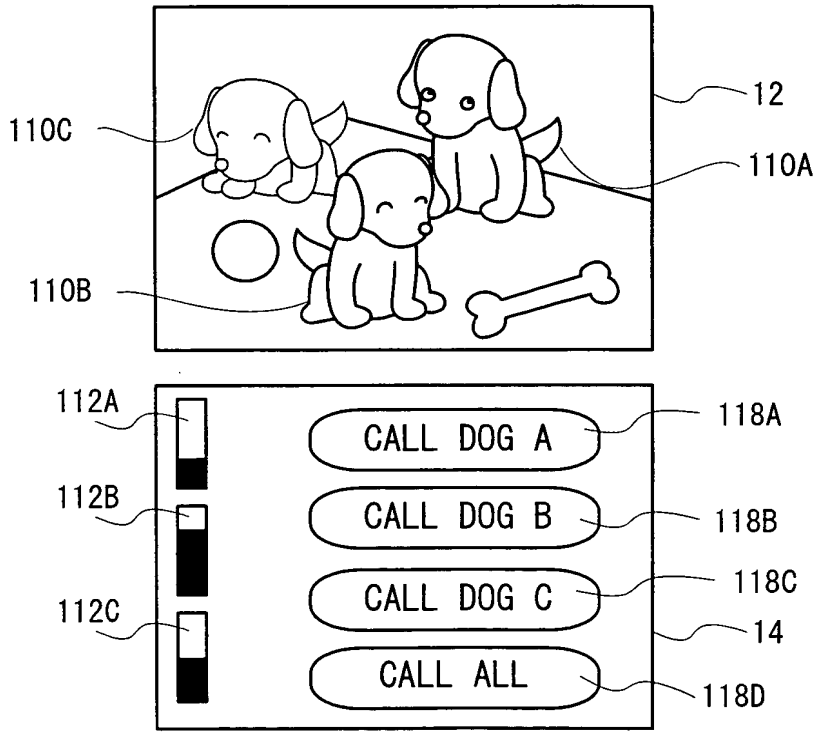

12
110B
112A
RETURN A
122A
112B
14
RETURN C
122C
112C
RETURN ALL
122D
110C
110A

FIG. 30

(A)


12
112A
112B
112C
122A
RETURN A
14
122B
RETURN B
24
122C
RETURN C
RETURN ALL
122D
110C
110B
110A

(B)


12
110C
110A
110B
112A
112B
112C
CALL DOG A
118A
CALL DOG B
118B
CALL DOG C
118C
14
CALL ALL
118D

MODIFIED EXAMPLE 2 OF PET-RAISING SIMULATION GAME

FIG. 31

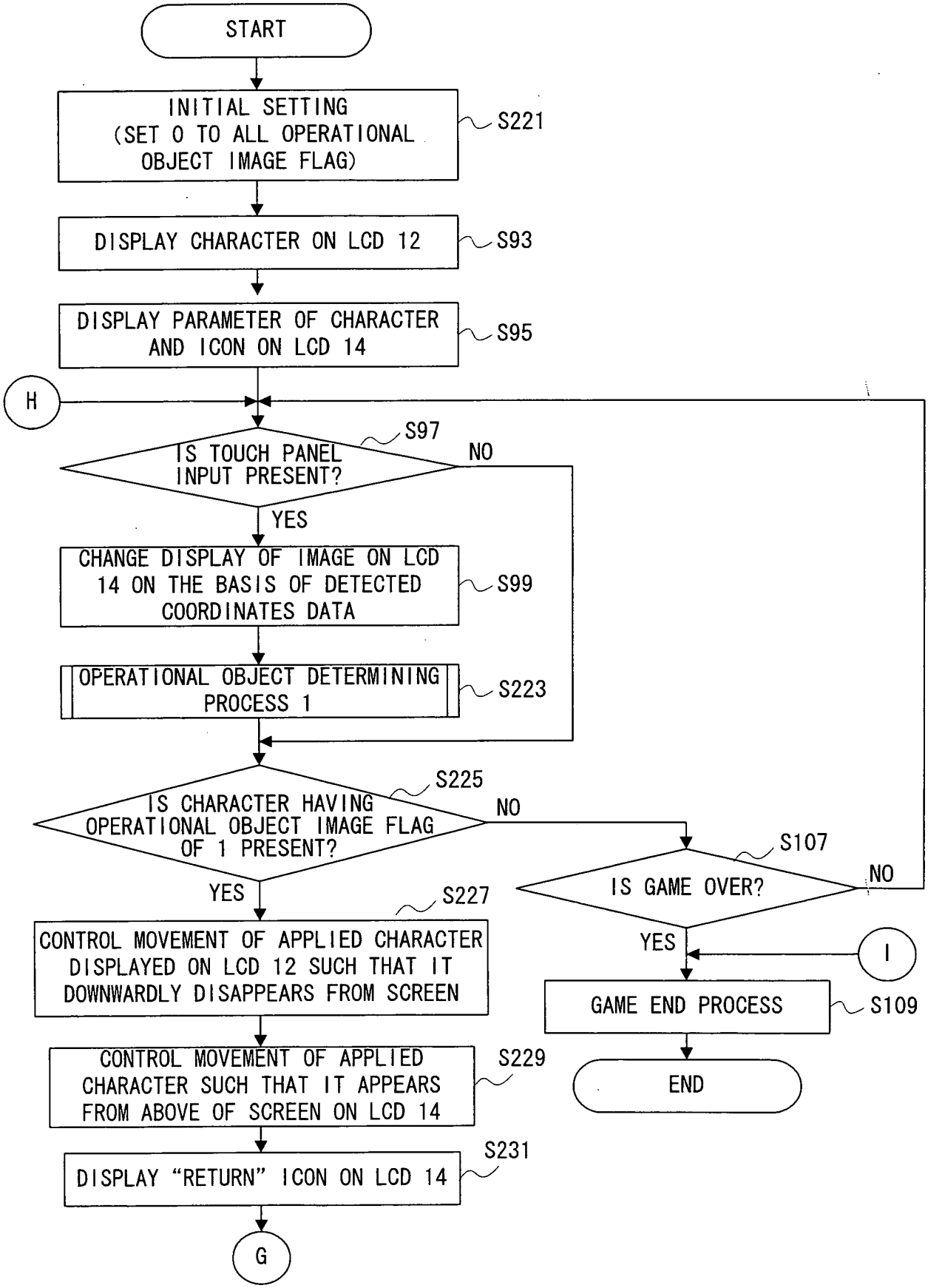


FIG. 32

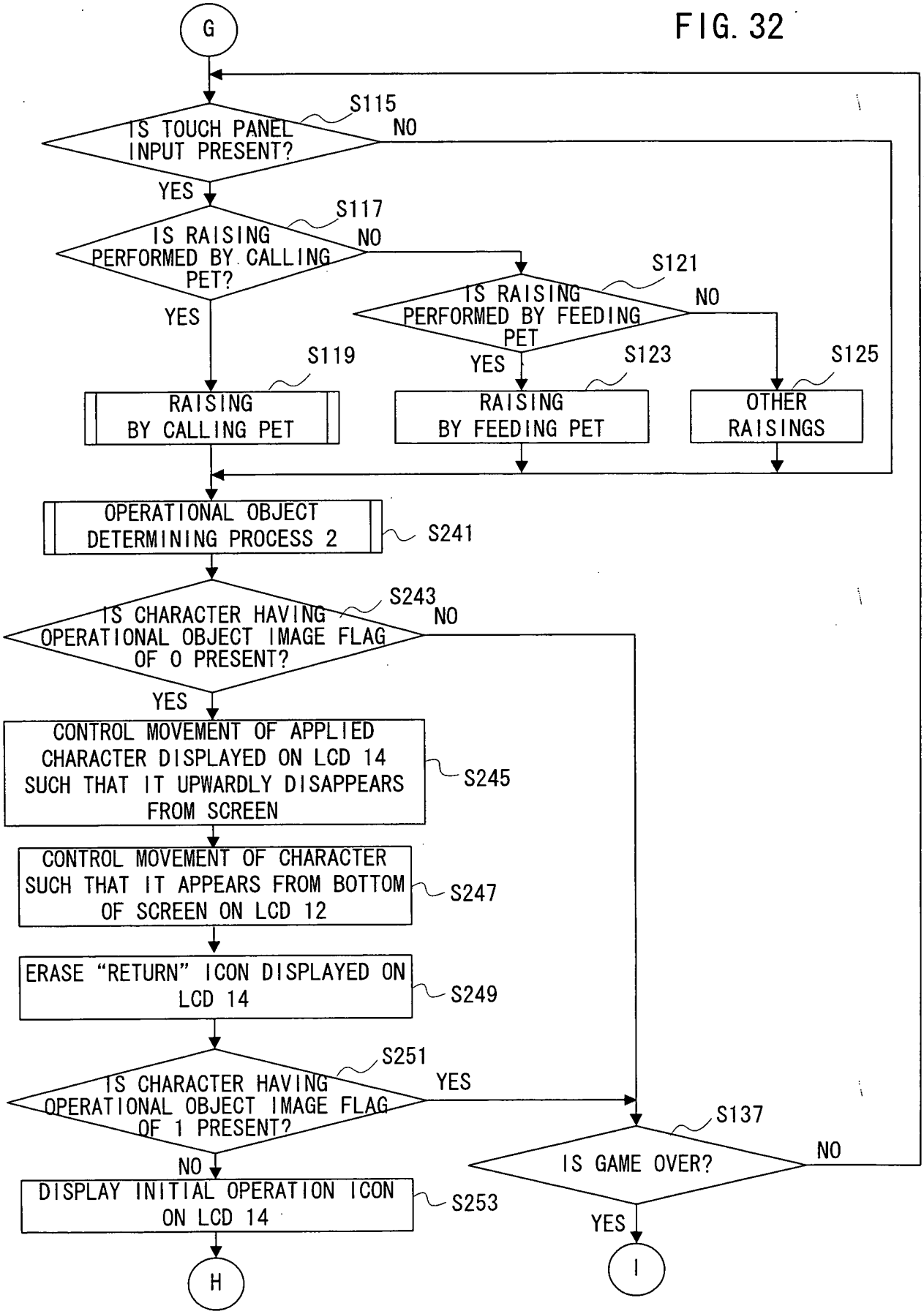

G
S115
IS TOUCH PANEL INPUT PRESENT?
NO
YES
S117
IS RAISING PERFORMED BY CALLING PET?
NO
YES
S121
IS RAISING PERFORMED BY FEEDING PET
NO
YES
S119
RAISING BY CALLING PET
S123
RAISING BY FEEDING PET
S125
OTHER RAISINGS
OPERATIONAL OBJECT DETERMINING PROCESS 2
S241
S243
IS CHARACTER HAVING OPERATIONAL OBJECT IMAGE FLAG OF 0 PRESENT?
NO
YES
CONTROL MOVEMENT OF APPLIED CHARACTER DISPLAYED ON LCD 14 SUCH THAT IT UPWARDLY DISAPPEARS FROM SCREEN
S245
CONTROL MOVEMENT OF CHARACTER SUCH THAT IT APPEARS FROM BOTTOM OF SCREEN ON LCD 12
S247
ERASE "RETURN" ICON DISPLAYED ON LCD 14
S249
S251
IS CHARACTER HAVING OPERATIONAL OBJECT IMAGE FLAG OF 1 PRESENT?
YES
NO
DISPLAY INITIAL OPERATION ICON ON LCD 14
S253
H
S137
IS GAME OVER?
NO
YES
I

FIG. 33

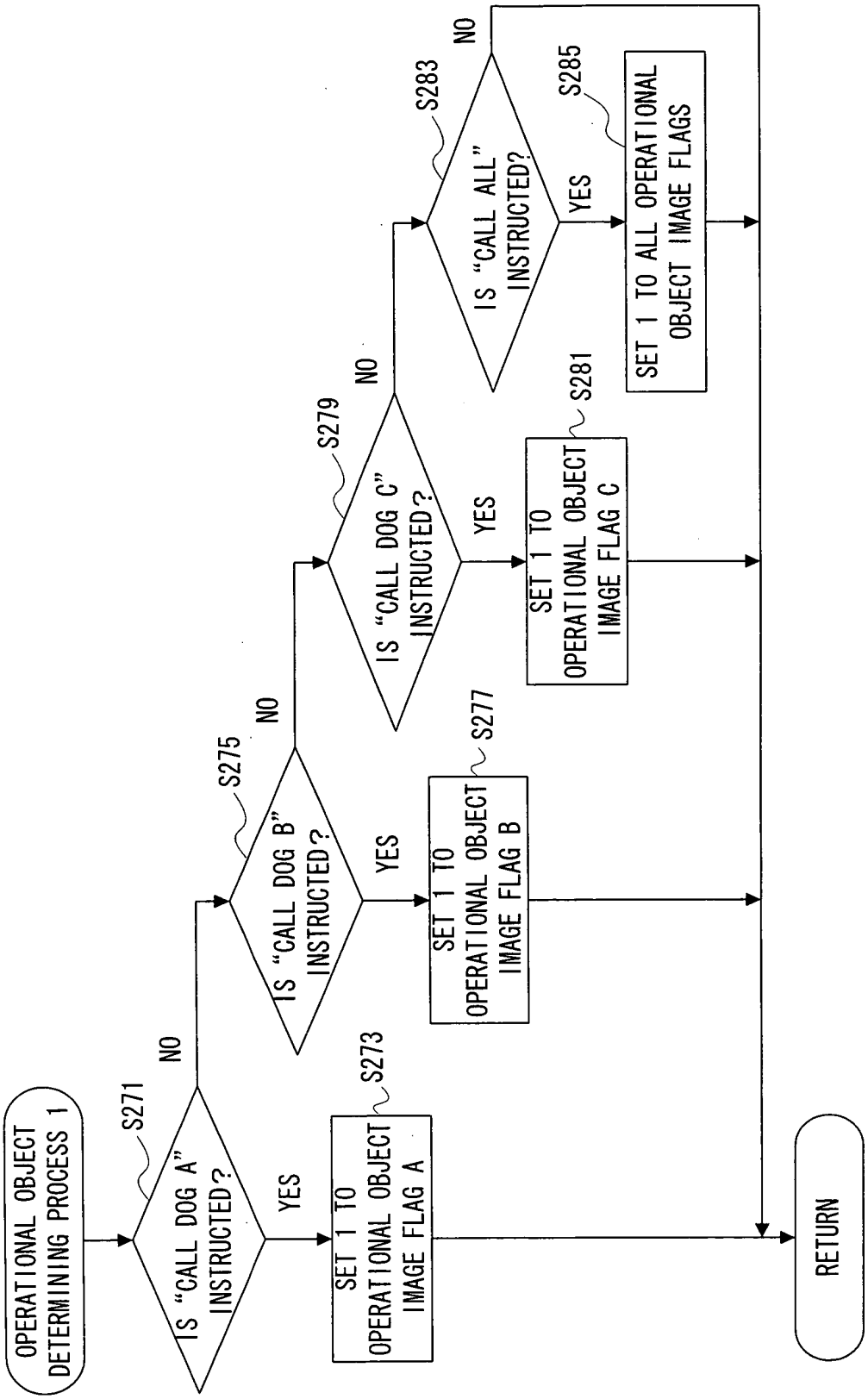
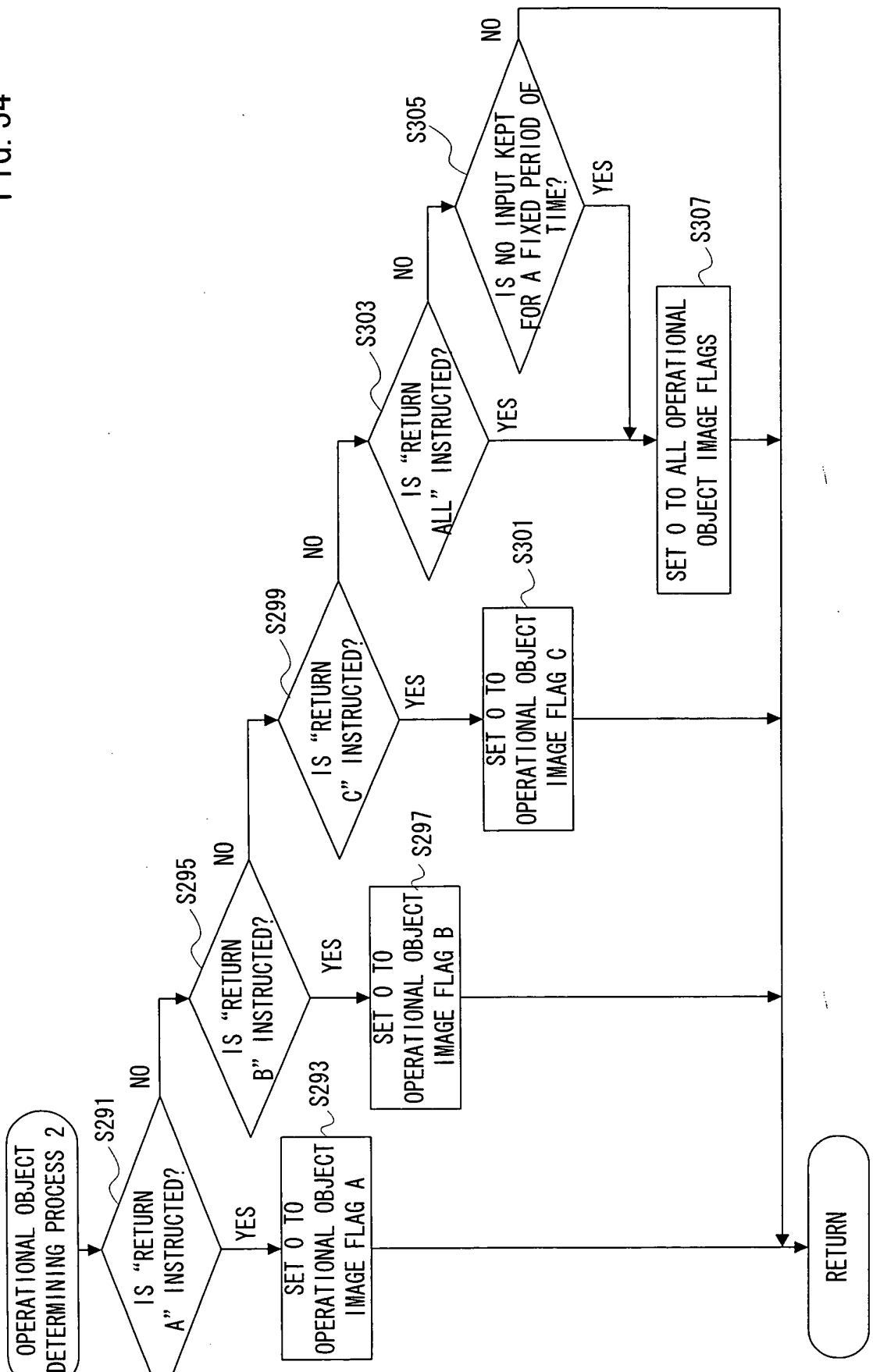

OPERATIONAL OBJECT DETERMINING PROCESS 1
S271
IS "CALL DOG A" INSTRUCTED?
YES
S273
SET 1 TO OPERATIONAL OBJECT IMAGE FLAG A
NO
S275
IS "CALL DOG B" INSTRUCTED?
YES
S277
SET 1 TO OPERATIONAL OBJECT IMAGE FLAG B
NO
S279
IS "CALL DOG C" INSTRUCTED?
YES
S281
SET 1 TO OPERATIONAL OBJECT IMAGE FLAG C
NO
S283
IS "CALL ALL" INSTRUCTED?
YES
S285
SET 1 TO ALL OPERATIONAL OBJECT IMAGE FLAGS
RETURN

FIG. 34


OPERATIONAL OBJECT DETERMINING PROCESS 2
S291
IS "RETURN A" INSTRUCTED?
YES
S293
SET 0 TO OPERATIONAL OBJECT IMAGE FLAG A
NO
S295
IS "RETURN B" INSTRUCTED?
YES
S297
SET 0 TO OPERATIONAL OBJECT IMAGE FLAG B
NO
S299
IS "RETURN C" INSTRUCTED?
YES
S301
SET 0 TO OPERATIONAL OBJECT IMAGE FLAG C
NO
S303
IS "RETURN ALL" INSTRUCTED?
YES
S305
IS NO INPUT KEPT FOR A FIXED PERIOD OF TIME?
YES
NO
S307
SET 0 TO ALL OPERATIONAL OBJECT IMAGE FLAGS
RETURN

MODIFIED EXAMPLE 3 OF PET-RAISING SIMULATION GAME

FIG. 35

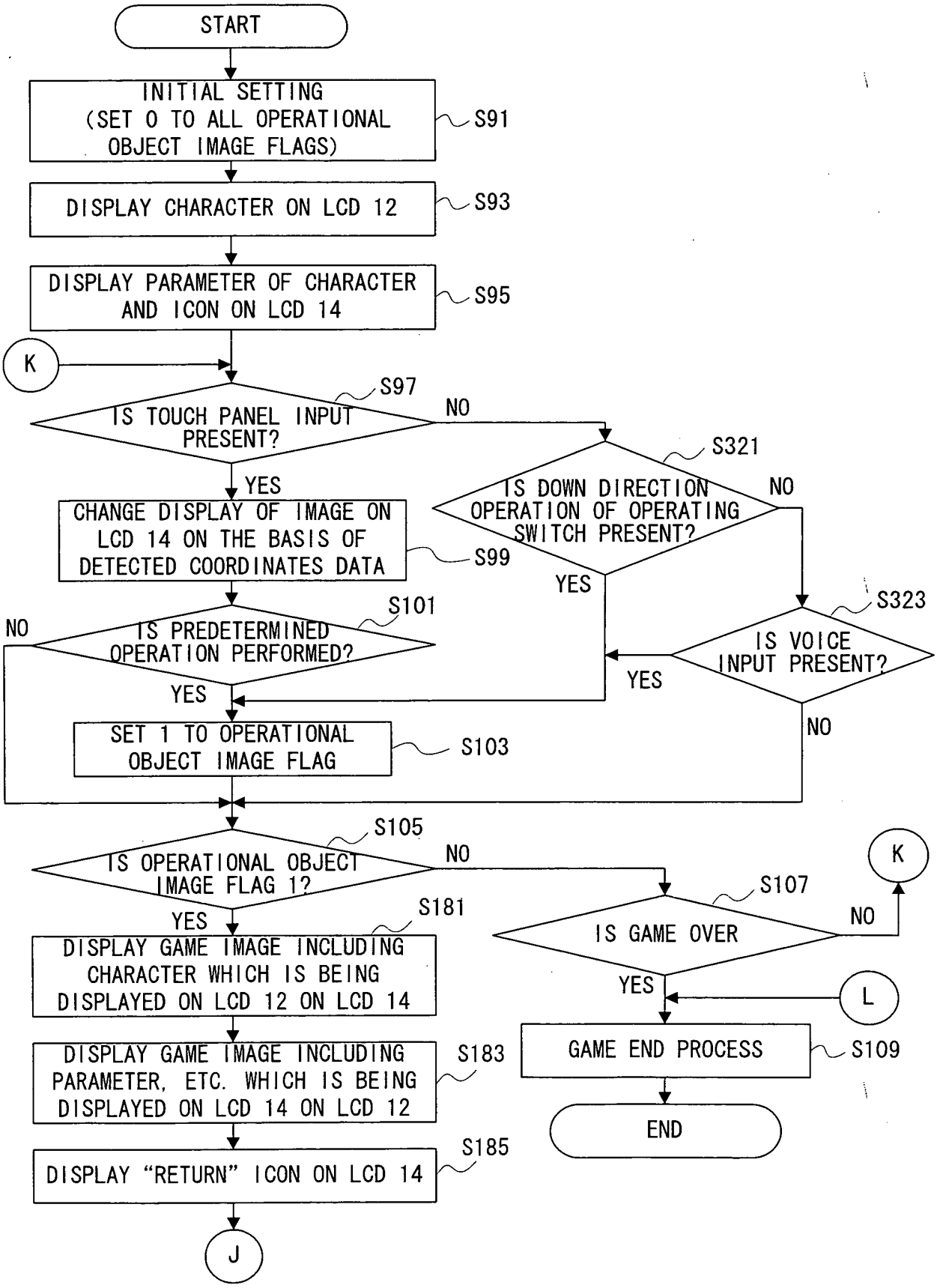
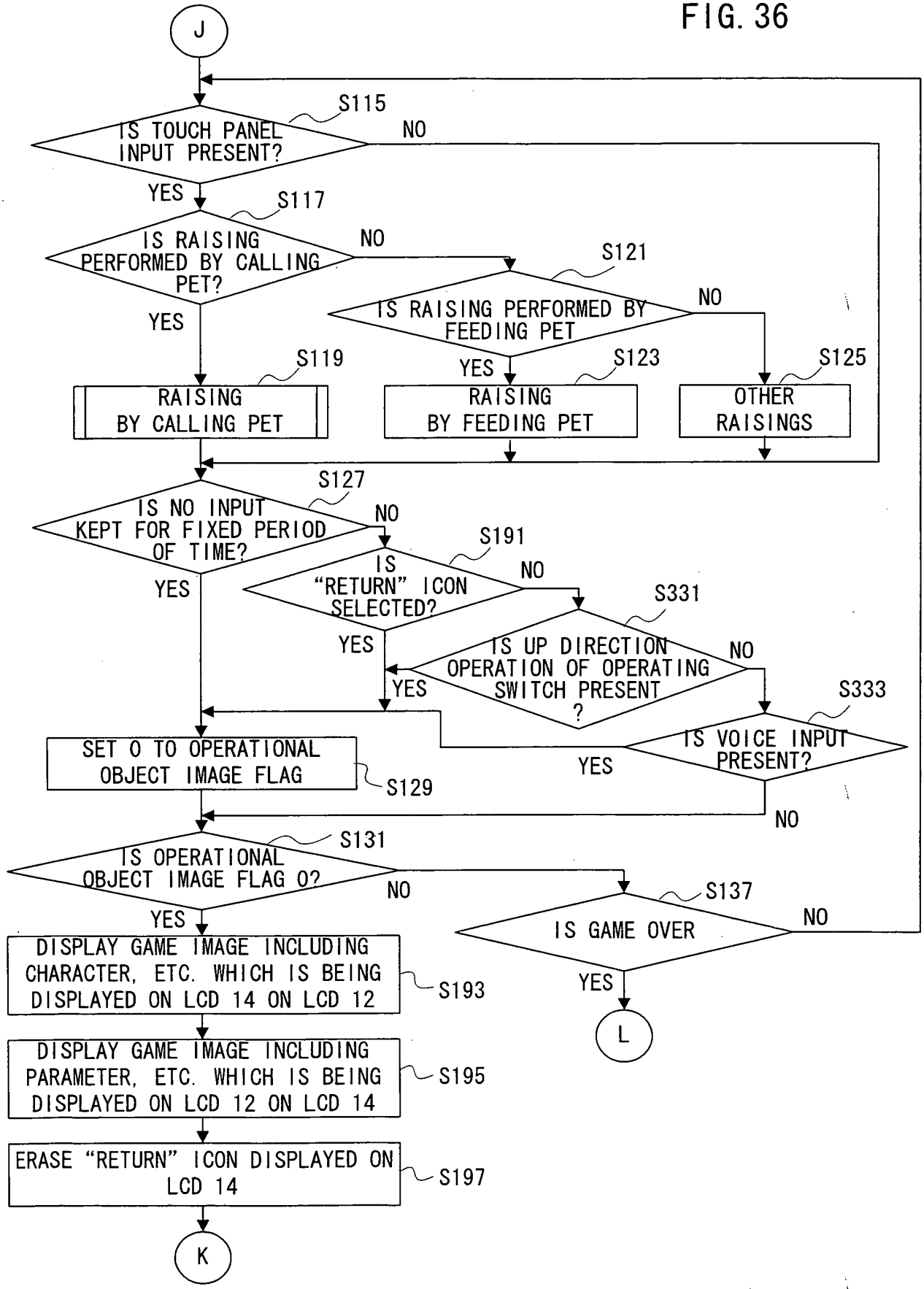


FIG. 36


J
S115
IS TOUCH PANEL INPUT PRESENT?
NO
YES
S117
IS RAISING PERFORMED BY CALLING PET?
NO
YES
S121
IS RAISING PERFORMED BY FEEDING PET
NO
YES
S119
RAISING BY CALLING PET
S123
RAISING BY FEEDING PET
S125
OTHER RAISINGS
S127
IS NO INPUT KEPT FOR FIXED PERIOD OF TIME?
NO
YES
S191
IS "RETURN" ICON SELECTED?
NO
YES
S331
IS UP DIRECTION OPERATION OF OPERATING SWITCH PRESENT ?
NO
YES
S333
IS VOICE INPUT PRESENT?
YES
NO
SET 0 TO OPERATIONAL OBJECT IMAGE FLAG
S129
S131
IS OPERATIONAL OBJECT IMAGE FLAG 0?
NO
YES
S137
IS GAME OVER
NO
YES
L
DISPLAY GAME IMAGE INCLUDING CHARACTER, ETC. WHICH IS BEING DISPLAYED ON LCD 14 ON LCD 12
S193
DISPLAY GAME IMAGE INCLUDING PARAMETER, ETC. WHICH IS BEING DISPLAYED ON LCD 12 ON LCD 14
S195
ERASE "RETURN" ICON DISPLAYED ON LCD 14
S197
K